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# CITY OF IRVINE GENERAL PLAN

Updated March 12, 1991





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## INTRODUCTION

### The City of Irvine

The City of Irvine is a chartered City incorporated in 1971. As of 1990, the City had a population of 110,330, and is expected to have a population of 154,000 in the year 2000.

The City, as illustrated in Figure A, encompasses approximately one half of the area known as the Irvine Ranch and is centrally located within the Los Angeles-San Diego urbanizing corridor in the County of Orange and consists of the incorporated area of the City of Irvine and the sphere of influence agreed to by the Local Agency Formation Commission and adjacent cities.

The incorporated area of the City represents the area over which the City has direct responsibility. Within this area, the City can exercise a full range of zoning and police powers. The greater sphere-of-influence has been adopted by the Local Agency Formation Commission as the planning area for the extension of public services and future annexations to the City. Areas within the sphere-of-influence are intended to eventually become a part of the City and the City has planning responsibility for these areas.

### The General Plan

Guidance for local decision-making and formulation of public policy is found within the General Plan.

The State of California mandates cities to prepare, adopt, implement, and maintain a General Plan which guides the physical, social, and economic development of the jurisdiction. By requiring general plans, the State can be assured of a consistent framework for decisions while still allowing local control.

State policies pertaining to general plans can be summarized as follows:

- To improve the quality of life in California by preserving and using the resources of the land in economically and socially desirable ways. (Adapted from Government Code Section 65030.)
- To maintain, improve, and enhance the quality of air, water, and land according to state and national standards and local needs. (Adapted from Public Resources Code Sections 21000 et seq.)
- To ensure the preservation of open space for scenic beauty, recreation, the conservation of natural resources, and the protection of public health and safety. (Adapted from Government Code Sections 65560 and 65561.)
- To protect the state's most productive farm and rangelands from conversion to non-agricultural uses. (Adapted from Government Code Sections 51220 and 54790.2.)
- To ensure the provision of "decent housing and a suitable living environment for every California family." (Adapted from Government Code Section 65580(a).)



- To conserve water, air, and energy by considering the effect of future development on these resources and by encouraging new development which uses public facilities currently available and minimizes the need to travel. (Adapted from Public Resources Code Section 21001 and the 1978 Environmental Goals and Policies Report.)
- To provide transportation facilities and services that are adequate and efficient and that significantly reduce hazards to human life, pollution, noise, disruption of community organization, and damage to the natural environment. (Adapted from Government Code Section 14000.)
- To identify and reduce hazards to health and property from natural and manmade conditions, including floods, fires, landslides, soil erosion, seismic activity, airplane crashes, excessive noise, hazardous wastes, and congested and unsanitary living conditions. (Adapted from Water Code Section 8401.)
- To use reasonable and practical means in carrying out the general plan so that it will serve as a pattern and guide for orderly physical development and the preservation and conservation of open-space land and as a basis for the efficient expenditure of public funds. (Adapted from Government Code Section 65400(a).)
- To ensure that land use decisions are made with full knowledge of the long- and short-term economic and fiscal implications, as well as environmental effects. (Adapted from Government Code Section 65030.2.)

### General Plan Organization

The General Plan is composed of elements which address a broad and evolving range of issues. Each element of the plan identifies and describes goals, objectives, and implementing actions which provide specific direction for decision making and formulation of public policy.

The City of Irvine's General Plan contains the seven elements required by State law and eight optional elements which relate to the development of the City. They are as follows:

#### MANDATORY ELEMENTS

Land Use  
Housing  
Circulation  
Noise  
Safety  
Conservation & Open Space (combined)



## OPTIONAL ELEMENTS

Urban Design  
Scenic Highways  
Public Facilities  
Waste Management  
Energy  
Parks and Recreation  
Cultural Resources  
Seismic

Each element has the following format:

An introductory section comprised of:

Conceptual Overview  
Supporting Text  
Description of Element  
Existing Conditions  
Trends  
Identification of Issues  
Response to Issues

The introductory section of the element provides an overview of the element and background information which lends understanding to the policies set forth in the goal section.

A goal section comprised of

Goal  
Objectives  
Implementing Actions  
Standards  
Related Objective Numbers  
Compliance Regulations

The goal section of each element outlines City adopted policy.

Each element has one Goal. For each goal, Objectives and Implementing Actions have been listed. These reflect actions that the City should follow to attain the stated goal. Standards are specific, often quantified guidelines, which can often directly translate into regulatory controls.

### Consistency Provisions

The General Plan has been institutionalized through the enactment of statutes requiring consistency between certain local actions and the General Plan. Although the City of Irvine is a charter city and as such is not required to maintain consistency between its

Zoning Ordinance and General Plan, City policy requires that there be such consistency. Additional statutes, while not mandating consistency, require findings or a report on whether proposed actions conform to the General Plan. The state's general rule for consistency determination is stated as:

"An action, program, or project is consistent with the general plan if it, considering all aspects, will further the objectives and policies of the general plan and not obstruct their attainment."

The following is a partial list of consistency provisions in state law:

#### Zoning:

Government Code Section 65860 requires that zoning ordinances in counties, general law cities, and charter cities with a population of over two million be consistent with the general plan.

#### Subdivisions:

Government Code Sections 66473.5 and 66474 require that subdivision and parcel map approvals in all jurisdictions be consistent with the general plan.

Government Code Sections 66474.60 and 66474.61 require that subdivision and parcel map approvals in cities of more than 2,800,000 population (Los Angeles) be consistent with the general plan.

#### Reservations of Land Within Subdivisions:

Government Code Section 66479 requires that reservations of land for parks, recreational facilities, fire stations, libraries, and other public uses within a subdivision conform to the general plan.

#### Open Space:

Government Code Section 65566 requires that acquisition, disposal, restriction, or regulation of open space land by a city or county be consistent with the open space element of the general plan.

Government Code Section 65567 prohibits the issuance of building permits, approval of subdivision maps, and adoption of open space zoning ordinances that are inconsistent with the open space element of the general plan.

Government Code Section 65910 requires that every city and county adopt an open space zoning ordinance consistent with the open space element of the general plan.

Government Code Section 51084 requires cities and counties accepting or approving an open space easement to make a finding that preservation of the open space land is consistent with the general plan.

#### Park Dedications:

Government Code Section 66477 enables local governments to require as a



condition of subdivision and parcel map approval the dedication of land or a payment of fees for parks and recreational purposes if the parks and recreational facilities are consistent with an adopted recreation element in the general plan.

#### Local Coastal Programs:

Public Resource Code Section 30513 requires the zoning ordinances of the Local Coastal Program to conform to the certified coastal land use plan (i.e., portions of the general plan).

#### Capital Improvements:

Government Code Sections 65401 and 65402 require the review of and report on the consistency of proposed city, county, and special district capital projects, including land acquisition and disposal, with the applicable general plan.

#### Development Agreements:

Government Code Section 65867.5 requires that development agreements between developers and local governments be consistent with the general plan.

#### Redevelopment Plans:

Health and Safety Code Section 33331 requires that every redevelopment plan conform to the adopted general plan.

#### Housing Authority Projects:

Health and Safety Code Section 34326 declares that all housing projects undertaken by housing authorities are subject to local planning and zoning laws.

#### Special Housing Programs:

Health and Safety Code Section 50689.5 requires that housing and housing programs developed under Health and Safety Code Sections 50680 et seq. for the developmentally disabled, mentally disordered, and physically disabled be consistent with the housing element of the general plan.

#### Parking Authority Projects:

Streets and Highway Code Section 32503 requires that parking authorities in planning and locating any parking facility are "subject to the relationship of the facility to any officially adopted master plan or sections of such master plan for the development of the area in which the authority functions to the same extent as if it were a private entity."

#### Planning Commission Recommendations:

Government Code Section 65855 requires that the Planning Commission's written recommendation to the legislative body on adoption or amendment of a zoning ordinance include a report on the relationship of the proposed ordinance or amendment to the general plan.

## Project Review Under CEQA:

Title 14, California Administrative Code Section 15080 requires examination of projects subject to the provisions of the California Environmental Quality Act for consistency with the general plan.

## On-Site Wastewater Disposal Zones:

Health and Safety Code Section 6965 requires a finding that the operation of an on-site wastewater disposal zone created under Health and Safety Code Sections 6950 et seq. will not result in land uses that are inconsistent with the applicable general plan.

## Agricultural Preserves:

Government Code Section 51234 requires that agricultural preserves established under the Williamson Act be consistent with the general plan.

Government Code Section 51282 requires cities and counties approving a Williamson Act contract cancellation to make a finding that the proposed alternate use is consistent with the general plan.

## Mineral Resources:

Public Resources Code Section 2763 requires that city and county land use decisions affecting areas with minerals of regional or statewide significance be consistent with mineral resource management policies in the general plan.

## Solid Waste Facilities:

Government Code Section 41702 requires that the establishment or expansion of solid waste facilities be consistent with the general plan.

## Large-Scale Urban Development Projects:

Health and Safety Code Section 56032 requires that comprehensive development plans for large-scale urban development projects be consistent with the general plan.

## Development and Amendment Process

Amending the General Plan is a necessary process for maintaining a current and responsive General Plan. Changes in federal, state, and regional planning policies and in community values and needs are addressed through the amendment process.

The City's original General Plan was adopted in 1973, and since that time, several amendments have been adopted by the City. For example, General Plan Amendment 16, adopted in 1989, entailed a comprehensive re-evaluation of the City's existing and future mix, intensity, and spatial distribution of land uses. As a result, several elements were amended including the land use element, conservation and open space element circulation element, and the technical appendix to the noise element.

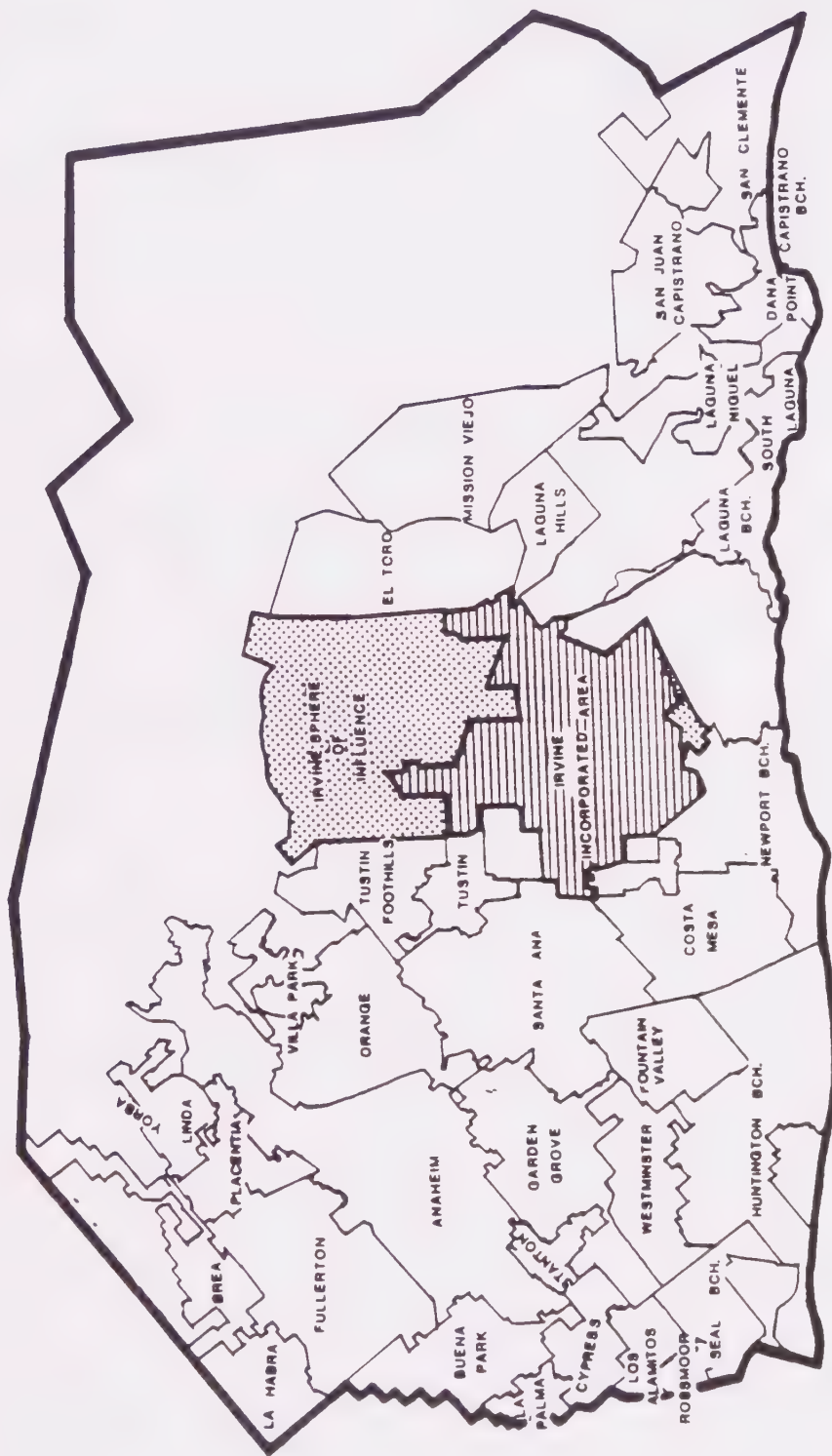
Amendments to the General Plan are limited to four per element during a given calendar year. An amendment may be initiated by a member of the public or the City Council. In



addition, the Director of Community Development may initiate and process minor technical amendments to the General Plan. Final approval is given by the City Council, after review of Planning Commission and Community Development staff recommendations. For further details on this process, see City Council Resolution Numbers 90-133 and 87-108 which set forth the procedures that the City of Irvine follows for amending the General Plan.

Additional information pertaining to the General Plan can be obtained by contacting the Advance Planning Section of the City's Community Development Department:

1 Civic Center Plaza  
Irvine, California 92713  
(714) 724-6000



LOCAL CONTEXT WITHIN ORANGE COUNTY

FIG. a









## I-A

### **LAND USE ELEMENT**

The Land Use Element provides a long-term guide for the development and use of land within a jurisdiction's incorporated territory and adopted sphere of influence. The Land Use Element is a required element of local general plans (California Government Code 65302(a)).

#### CONCEPTUAL OVERVIEW

The Land Use Element, through text, statistical tables, and diagrams (maps) designates the general distribution, location, extent and intensity of land uses. Through these components the Land Use Element represents the functional mix and most desirable pattern for urban and open space land uses that can presently be determined.

The Land Use Element plays a central role in identifying and resolving many land use issues, constraints and opportunities. The Land Use Element diagram (Figure A-1) graphically portrays the land uses of Irvine's incorporated territory and adopted sphere of influence and is located at the back of this document. The Land Use Element statistical tables are correlated with the Land Use Element diagram. The statistical tables (Figures A-5 through A-10) provide regulatory building intensity standards for the jurisdiction's incorporated territory and adopted sphere of influence. These figures establish minimum and maximum permitted residential dwelling units, and maximum commercial, industrial, institutional, military, and multi-use square footages. The statistical tables (Figures A-11 through A-18) provide non-regulatory information to determine, at a General Plan level, service level demands, public facility needs, and infrastructure sizing requirements based on land use intensity and population density, as well as estimates of land use acreages. The Land Use Element supporting text discusses; the issues, constraints, and opportunities involved in the development; the utilization of statistical tables and corresponding diagram in development; and sets the goals objectives and implementing actions.

The Land Use Element is organized into four sections: 1) Supporting text; 2) Statistical tables, 3) Goals, objectives and implementing actions; and 4) Land Use Element diagram (Figure A-1). Additionally, the non-regulatory statistical tables (i.e., Figures A-11 through A-18) are appended to the General Plan as an informational data base, to be up-dated periodically as development is approved in the City or as better information is collected

through the City's development monitoring program (i.e., Objective A-1). These non-regulatory statistical tables represent summaries of the assumptions that were used in the assessment of the correlation of the Land Use Element and the other Elements of the City's General Plan, in terms of service level demands, public facility needs and infrastructure sizing requirements based upon land use intensities, assumed population densities, and estimated acreages of land uses. The non-regulatory statistical tables represent a historical baseline for growth monitoring and identification of trends. As such the non-regulatory statistical tables will provide the foundation for monitoring reports on the implementation of the General Plan, and are not considered part of the General Plan.

## SUPPORTING TEXT

### Description of Land Use

The Land Use Element embodies many findings and recommendations relating to the City's spatial, temporal, building intensity, population density, and fiscal development. The Land Use Element diagram is a graphic representation of the desired spatial distribution of land uses. The Land Use Element residential phasing diagram portrays an estimated development sequence of residential land uses. The Land Use Element supporting text, goal, objectives and implementing actions provide guidance regarding the natural and built environment, building intensity and fiscal performance.

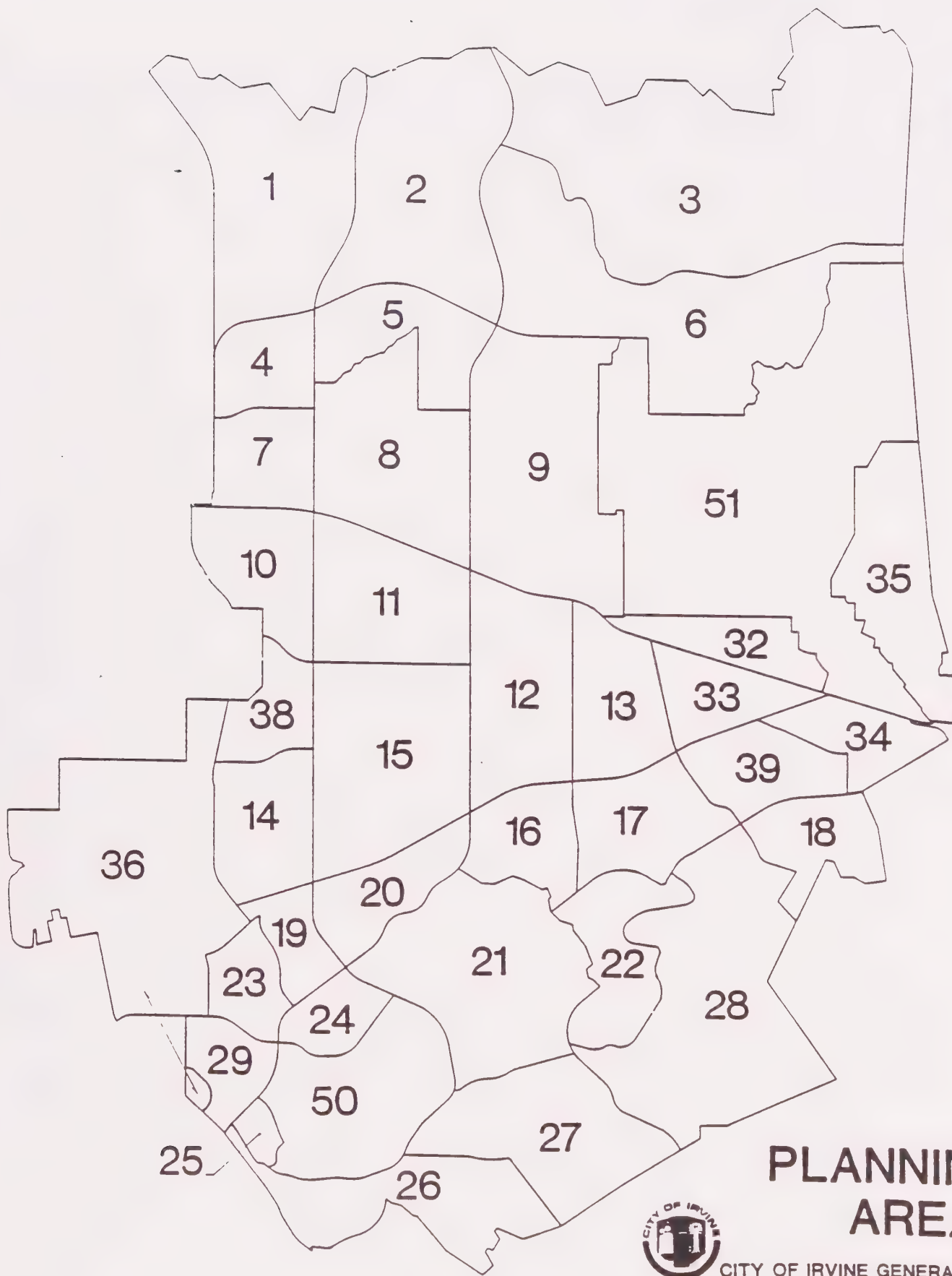
The Land Use Element diagram is divided into statistical areas, called planning areas, as depicted in Figure A-2. Planning areas form the measurement unit for allocating and monitoring building intensity and population density by Land Use Element category (i.e. Land Use Element statistical tables Figures A-5 through A-18). Additionally, other land use information (e.g. zoning) is also assigned to planning areas to provide a constant statistical unit for evaluation and monitoring purposes.

The Land Use Element statistical tables (i.e. Figures A-5 through A-18) are divided into two sections. The first section (i.e. Figures A-5 through A-10) comprises the regulatory documents and as such, is the quantification of building intensities of the Land Use Element diagram as required by State law. Thus, figures A-5 through A-10 provide a statement of the City's long-range policy for development represented by the Land Use Element diagram.

The second section (i.e. Figures A-11 through A-18) consists of the non-regulatory documents which provide; assumptions to estimate service level demands, (e.g. public facilities, roads, etc.) and estimates of land use acreage. This section is refined periodically to incorporate the best available information that is



provided by federal, state, and local agencies (e.g. employment population, student figures and refined acreage totals from the City's development monitoring program).



# PLANNING AREAS



CITY OF IRVINE GENERAL PLAN



## Existing Conditions

The City of Irvine and its sphere of influence are located within the coastal and foothill region of central Orange County. Prominent landform areas comprise the City's topographical character and influenced the location, distribution, function and building intensity and population density of land uses. The landform areas are: 1) Lomas de Santiago Hills; 2) Northern flatlands; 3) Central flatlands; and 4) San Joaquin Hills (see Figure A-4).

The built portions of the General Plan land uses are generally centered in the northern and central flatlands, and along the westerly portion of the San Joaquin Hills. These land uses are also adjacent to existing regional infrastructure facilities such as freeways, railroads and airports. Building intensity and population density, therefore, is concentrated in areas of gradual slopes and close proximity to regional facilities.

As of January, 1989, approximately 50% of the potential General Plan level development has occurred or is committed through subsequent planning approvals (i.e. zoning and subdivision).

Residential growth has been concentrated within Planning Areas 8, 10, 11, 14, 15, 19, 20, 21, and 24. Development within these planning areas is either completed or near completion.

Employment growth has been concentrated adjacent to regional transportation facilities on the western and eastern edges of the City, primarily in Planning Areas 13, 32, 33, 35, 36, and 50. Planning Area 36 (Irvine Business Complex), through several rezoning efforts, is evolving towards an urban character with high-rise office complexes and is a major regional employment center. Planning Area 50 (University of California, Irvine) has grown rapidly and is a major employment generator. Planning Areas 13, 32, 33, 34, and 35 are developing into important regional employment centers with a variety of industrial uses and office complexes.

In contrast, portions of large, unbuilt General Plan land uses are located in the Lomas de Santiago Hills, the balance of the San Joaquin Hills, and portions of the northern flatlands within the high noise and crash hazard zones of El Toro Marine Corps Air Station. These unbuilt areas are adjacent to regional open space areas (e.g. Limestone Regional Park, Crystal Cove State Park and Irvine Coastal Dedication Area) or hazardous areas; thus building intensity and population density are minimal.

- center located along the eastern edge of the City and adjacent to regional circulation routes;
- University of California, Irvine and its adjoining lands located along the City's southern edge;
  - MCAS El Toro, a military facility located along the City's eastern edge;
  - Residential uses concentrated within the central portion of the City.
  - Residential density correlated to topography, infrastructure and employment opportunities;
  - The east/west activity corridor and related open space spine connecting the City's regional commercial and industrial centers with various residential planning areas;
  - The north/south Peters Canyon Wash and Jeffrey Road open space spines connecting regional conservation and open space areas;
  - Preservation of agricultural uses in the high noise and crash hazard zones adjacent to the Marine Corps Air Station (MCAS) El Toro;
  - Preservation of large contiguous conservation and open space areas (wilderness areas) adjacent to regional open space areas such as Limestone Regional Park, Crystal Cove State Park, and Upper Newport Bay Ecological Reserve.

### Trends

By 1991, the City of Irvine will be twenty years old and will have reached the halfway point of its projected growth and development. The development of the balance of the City's General Plan represents a transition from a new town to a mature City. Correspondingly development also will continue adjacent to the City's borders, as the County and neighboring cities also evolve.

The ability of the urban and open space environments to absorb the expected growth is diminishing in proportion to their capacity thresholds. As such this transition has implications and opportunities for Irvine's short-term and long-range planning activities and programs.

In the transition to a mature City, Irvine will need to manage a defined and established urban core, while simultaneously accommodating the expected development of what amounts to the doubling of the City's current residential population and tripling of its employment population. As a maturing City, the City must begin to plan for the problems associated with an aging infrastructure system. In addition, in the post - Proposition 13 era, commercial and industrial development, which help provide the long-range fiscal strength of the City, will continue to out-pace new residential development.



These and other trends have emerged in the transition from new town to mature City in a region in transition from rural to urban uses. A commitment to comprehensive planning, taking into account these and other trends is required to address the myriad of issues resulting from the transition from new town to mature city in a region in transition from rural to urban uses.

### Identification of Issues

As Irvine transitions, and begins to focus more closely on the cumulative effects of employment and population increase, infrastructure capacity limitations and municipal revenue and expenditure limitations, it has had to deal with the following major issues:

1. Maintaining a functional mix of land uses in order to provide an adequate relationship between housing and employment opportunities as the City transitions to projected buildout.
2. Balancing employment and population growth and fiscal constraints so that the City can continue to provide adequate infrastructure, transportation systems, open space areas and other infrastructure and service needs for its residents, and maintain municipal revenues and expenditures.
3. Addressing the cumulative effects of employment and population increases on the City's infrastructure and financial base through a comprehensive, planned approach, rather than through a project-by-project strategy.
4. Identifying and consolidating important conservation and open space areas into large contiguous areas that may be integrated into local and regional open space areas, rather than responding to open space needs on a project-by-project basis.

Overall, the integration of the following land use issues into the Land Use Element framework is important to ensure adequate and appropriate development patterns. Consequently, these issues will need to be addressed and monitored (i.e., Objective A-1) through the Land Use Element in conjunction with the other elements of the City's General Plan.

### Response to Issues

In response to the previously identified issues, this section describes the following: 1) the General Plan framework for the Land Use Element; 2) specific land use categories for evaluating, guiding and monitoring urban and open space land uses; and 3) Land Use Element statistical tables (i.e. regulatory building intensity documents and non-regulatory documents).

## 1. General Plan Framework:

The Land Use Element diagram and statistical tables provide an overall short-term and long-range implementation strategy for the distribution, building intensity, and population density of land uses. The Land Use Element is utilized as a day-to-day decision-making document for evaluating and implementing subsequent development proposals (e.g. zoning and subdivision applications), or for projecting housing needs, employment, and municipal revenues and expenditures.

As such, the Land Use Element provides a dynamic and continuous strategy for evaluating and guiding urban and open space land uses. Specifically, the Land Use Element through its statistical tables, goal, objectives and implementing actions establishes tables and programs to address the above identified issues. For example:

- 1) The Land Use Element statistical tables includes regulatory building intensity standards and non-regulatory land uses estimates. Therefore, statistical tables are utilized in reviewing projects; to ensure General Plan consistency; to estimate traffic, noise, air quality, and fiscal impacts through computer modeling techniques; to estimate jobs to housing projections for local and regional planning needs; and to implement the Land Use and Conservation and Open Space Elements' phased dedication and compensating development opportunities program.
- 2) Land Use Element Objectives A-2 and A-3 establish a phased dedication and compensating development opportunities program which integrates the Land Use and Conservation and Open Space Elements together. This program provides for the permanent protection of large contiguous conservation and open space areas through large scale planning techniques rather than through project-by-project dedication. (See Conservation and Open Space Element and Objective L-1).
- 3) Land Use Element Objective A-5 establishes a fiscal impact analysis program to evaluate municipal revenues and expenditures relative to land use policy decisions.
- 4) Land Use Element Objective A-1 establishes a monitoring program to evaluate and report to City Council on a regular basis the status of General Plan objectives, including but not limited to: fiscal ratios; circulation levels of service; and phased dedication of conservation and open space areas.



In addition, the Land Use Element is utilized in day-to-day decision making, as such updating of the Land Use Element statistical tables, diagram and other elements on a periodic basis for maintenance of internal consistency, legal validity and impact analysis is necessary for understanding existing and projected conditions.

## 2. Land Use Element Categories and Definitions

The Land Use Element categories provide guidance for determining appropriate land uses. The reference of a specific land use in the Land Use Element categories does not necessarily mean that it is permitted in all areas where that category is shown on the Land Use Element diagram (Figure A-1) since land uses may be modified by other General Plan Policies. In addition, at the time of subsequent planning actions such as zoning, further refinement of permitted land uses and building intensity (consistent with the General Plan) will occur.

Agriculture is a permitted land use, at least on a temporary basis, under all of the Land Use Element categories.

### a. Conservation and Open Space

The Conservation and Open Space land use category provides for various opportunities towards the preservation and enhancement of the planning area's natural environment. This land use category contains six subcategories, which are described below. Additional information and guidance about this matter and its implementation and relationship to the land use phased dedication program is provided in the Conservation and Open Space Element (Chapter L).

#### 1. Preservation Areas

The Preservation Areas land use subcategory is identified on the Land Use Element diagram for the protection and maintenance of natural resources. This subcategory identifies lands to be transferred to public ownership through the phased dedication program which is an integral part of the open space implementation program.

Preservation Areas are lands that contain visually significant ridgelines, biotic communities of high significance, geologic constraints and cultural resources. These lands have been judged desirable for permanent preservation in a natural state with little or no modification; they have also been amassed into large scale contiguous areas, which overall, have been



judged to be more protective of natural resources than could be achieved on an incremental basis with individual development projects.

- Passive public recreation (such as tent camping, hiking, biking, and equestrian trails), botanical gardens, cattle grazing, scientific research and other public uses compatible with the natural amenities of these lands; transportation corridors, arterial highways, utilities, transition zones, fuel modification zones, habitat enhancement, drainage and flood control facilities, and other infrastructure designed so as to minimize any adverse environmental impacts are allowable uses. All residential, commercial, and industrial uses are strictly prohibited (Preservation Areas in Planning Area 12 are exempted from this commercial prohibition). Passive recreation activities such as riding, hiking, picnicking and camping may be operated as a regional park concession by a limited commercial venture under contract to the City. In addition, consistent with the City's zoning ordinance, agricultural uses are permitted uses prior to transfer through the phased dedication program.

Areas designated for preservation shall be primarily for their biotic and cultural resources and open space values, with recreation uses such as community parks not allowed. Biking, equestrian and hiking shall be subordinate and secondary uses within the preservation areas, and where deemed appropriate constantly monitored for their impact and compatibility.

## 2. Recreation Areas

The Recreation Areas land use subcategory provides for community level recreational opportunities and activities. This subcategory identifies lands suitable for active recreational opportunities and activities for public use and enjoyment. Guidance about park development and standards are provided in the Parks and Recreation Element (Chapter K) and the City's subdivision ordinance.

Recreation Areas are distinguished from Preservation Areas by more intense recreational uses and their manicured appearance and improved facilities. Additionally, Recreation Areas do not necessarily require maintenance of natural resources.

Recreation Areas will not be limited to low intensity recreational activities as are Preservation Areas, but will be designed to accommodate the development of picnicking and fishing areas, nature centers, stables, - golf courses, regional and community level parks, swimming pools, botanical gardens, wholesale nurseries (within limited areas), and open space spines.

### 3. Water Bodies

The Water Bodies land use subcategory identifies areas for the establishment of public and privately owned water sources for consumption and recreational use.

Public and privately owned reservoirs and lakes will provide the City with sufficient water resources and opportunities to develop water-related recreation activities (e.g., boating and fishing), supply water resources for agriculture and domestic use, to irrigate passive and active recreation facilities (e.g., ball fields and picnicking).

### 4. Agriculture

The Agriculture land use subcategory is shown on the Land Use Element diagram in order to preserve prime agricultural land (Class I and II soils); while allowing an appropriate use for land impacted by aircraft crash hazard zones and noise from El Toro Marine Corps Air Station.

Proper cultivation of the area will provide agriculturally productive land without creating land use related disturbances. In addition, the land will establish large areas of open space which will provide visual contrast to the built environment, cultural linkage to the City's agrarian past, open space linkage to the Santiago Hills and San Joaquin Hills, economic benefits to the community, and enhancement of the scenic environment of the area and the surrounding communities.

### 5. Golf Course Overlay

Within the Golf Course Overlay land use subcategory golf course is a permitted use.

## 6. Landfill Overlay

The Landfill Overlay land use subcategory is shown on the Land Use Element diagram in order to provide adequate Class II solid waste sites within the specific areas with an underlying Recreation Area designation (see Waste Facility Element).

The landfill shall be located in a sensitive manner so as not to adversely affect surrounding land uses (residential, institutional, conservation and open space). Additionally, the land must be capable of receiving solid waste materials without risking environmental degradation.

The landfill will provide the City with an appropriate area for disposal of solid waste materials. Upon the eventual closure of the landfill, the land must be in suitable condition to support the underlying primary land use.

### b. Residential

The Residential land use category provides for varying intensities of residential land uses based upon the number of dwelling units per gross acre. This land use category contains five subcategories, divided by intensity ranges. In conjunction with Multi-Use, Business and Industrial, and General Institutional land use categories, the Residential land use category provides a variety of housing opportunities for the City of Irvine.

Additional information and guidance about residential intensity and its relationship to the City's housing goals, objectives and implementing actions is provided in the Housing Element (Chapter C).

Density averaging within a General Plan residential category may be permitted at the time of zoning and/or concept plan in order to provide a mix of housing types and opportunities through lower and higher densities, provided that the overall intensity does not vary from the category's minimum and maximum density range (i.e., Figure A-10), and the subsequent phased dedication requirements (i.e., Objective A-2 and Objective L-1) are fulfilled. A variety of density ranges provides opportunities to cluster residential development and to develop a variety of housing types.



The corresponding land use intensities and population standards are presented in the Land Use Element statistical tables.

1. Estate Density
2. Low Density
3. Medium Density
4. Medium-High Density
5. High Density

c. Multi-Use

The Multi-Use land use category provides for varying intensity and a variety of land uses. Any multi-use designation may contain one or more land uses. Generally, land uses in this category are high intensity and urban in character.

The permitted land uses include: high density residential (25-40 du/ac), and where noted in the General Plan text, medium high (10-25 du/ac); commercial; institutional; and conservation and open space land uses.

The corresponding land use intensities and population standards are included in the Land Use Element statistical tables.

d. Commercial

The Commercial land use category consists of three primary levels of retail commercial uses; village centers, district centers and regional center. These, plus three other commercial land uses, serve the commercial needs of the Community. Each subcategory is discussed below:

1. General Commercial

The General Commercial subcategory includes uses not typically related to shopping centers, including professional and administrative offices, automobile service stations, plant nurseries, restaurants, outdoor storage and sales, and retail or service commercial uses.

The corresponding land use intensity and population standards are included in the Land Use Element statistical tables.

## 2. Village Commercial

The Village Commercial subcategory provides for the sale of convenience goods (foods, drugs, and sundries) and personal services (laundry and dry cleaning, barber shops, shoe repair, etc.) for the day-to-day living needs of the immediate neighborhood (5,000 - 10,000 people). It is built around a supermarket as the principal tenant and is sited so that it will meet the retail commercial needs of the village that it serves.

The corresponding land use intensity population standards are included in the Land Use Element statistical tables.

## 3. District Commercial

The District Commercial subcategory is intended to accommodate the commercial needs of a group of villages or a district (40,000 - 100,000 people). In addition to including the uses normally found in villages centers, a District Commercial center provides a wider range of facilities for the sale of soft lines (wearing apparel for men, women, and children) and hard lines (hardware and appliances). It is built around a junior department store, variety store, or discount department store as the major tenant, in addition to a supermarket, and may also include most of the following uses: specialty clothing stores, movie theatres, commercial recreation facilities, hotels and motels, restaurants, and other facilities which are meant to serve as a multi-village population base.

The corresponding land use intensity and population standards are included in the Land Use Element statistical tables.

## 4. Specialty Commercial

Included in this subcategory are commercial uses with regional markets which may be grouped in one area to provide a particular service or product. An example would be the grouping of automobile dealerships into one center for the shopping convenience of the customer. Other uses which may be appropriate include commercial recreation facilities and retail commercial facilities which are related to, and supportive of, the primary specialty use theme.

The corresponding land use intensity and population standards are included in the Land Use Element statistical tables.

#### 5. - Regional Commercial

The Regional Commercial subcategory includes large shopping centers with a variety of major department stores and specialty shops. They are typically built around one or two full-line department stores of generally not less than 100,000 square feet. They may also include professional offices, institutional and government uses, hotels and motels.

The corresponding land use intensity population standards are included in the Land Use Element statistical tables.

#### 6. Commercial Recreational

This subcategory includes commercial recreation or leisure time activities, including amusement parks, miniature golf courses, go-cart tracks, equestrian centers, archery ranges, and sports clubs such as tennis, handball, and swimming facilities.

The corresponding land use intensity and population standards are included in the Land Use Element statistical tables.

#### e. Institutional

The Institutional land use category provides for varying intensity and variety of public and quasi-public facilities which support the community. The Institutional land use category consists of eleven subcategories. Each subcategory is discussed below:

Some Institutional land uses (i.e., general, elementary, intermediate, high schools, utilities and public facilities) are allowed in all Land Use Element categories consistent with established City ordinances and policies. In most cases only major Institutional land uses (such as public schools, universities, utilities and public facilities) and other uses (such as community facilities) are graphically depicted. Institutional land uses will be reviewed concurrent with subsequent development applications in accordance with Figure A-9. Adjustments to square footage will be included in the development monitoring program and reflected in the statistical tables through annual general plan technical updates.



In addition, the Public Facilities Element (Chapter G) contains a comprehensive Institutional land use public facility guideline which indicates the population required to support a given public facility. Examples of this have been provided in the following educational related designations.

#### 1. General Institutional

This subcategory includes hospitals, governmental offices and facilities related to educational institutions. Land uses which are compatible with the adopted land use designation may also be permitted. These uses may include residential (only for the purpose of housing persons directly related to the institution, such as nurses and doctors for a hospital), not-for-profit housing, service retail and service commercial.

The corresponding land use intensities population standards are included in the Land Use Element statistical tables.

#### 2. University of California

This subcategory encompasses land under the jurisdiction of the University of California. University educational operations, research activities and related enterprises serve as the foundation for allowable land uses.

Permitted land uses include, but are not limited to: educational buildings; administrative offices; research facilities in connection with university educational operations; housing; community support and commercial/retail related facilities; and conservation and open space activities.

The land use intensity and population standards are included in the Land Use Element statistical tables.

#### 3. UCI Inclusion Area

This subcategory encompasses land under the jurisdiction of the University of California. University educational operations, research activities, and related enterprises serve as the foundation for allowable uses.

Permitted land uses include, but are not limited to: educational buildings and operations; administration offices; research facilities in connection with University educational operations; faculty and student housing; community support and commercial/retail related facilities; and conservation and open space activities.

The land use intensity and population standards reflect the existing long range plan for the University of California, Irvine and are included in the Land Use Element statistical tables.

#### 4. Elementary School

This subcategory encompasses land under the jurisdiction of the Irvine Unified School District. Educational facilities, operations, and related enterprises serve as the foundation for allowable uses.

Typically, the elementary school has a capacity of 500 to 700 students. While the location and size of elementary schools is the responsibility of the Irvine Unified School District, the District and the City of Irvine cooperate in reserving the necessary land to accommodate future facilities. Additionally, the District is subject to the provisions contained in the California Government Code Sections 65401 and 65402.

The corresponding land use intensity population standards are included in the Land Use Element statistical tables.

#### 5. Intermediate School

This subcategory encompasses land under the jurisdiction of the Irvine Unified School District. Educational facilities, operations, and related enterprises serve as the foundation for allowable uses.

Typically, the intermediate school has a capacity of 700 to 900 students. While the location and size of the intermediate school is the responsibility of the Irvine Unified School District, the District and the City of Irvine cooperate in reserving the necessary land to accommodate future facilities. Additionally, the District is subject to the provisions contained in the California Government Code Sections 65401 and 65402.

The corresponding land use intensity and population standards are included in Land Use Element statistical tables.

#### 6. - High School

This subcategory encompasses land under the jurisdiction of the Irvine Unified School District. Educational facilities, operations, and related enterprises serve as the foundation for allowable uses.

Typically, the high school has a capacity of 900 to 1,200 students. While the location and size of the high school is the responsibility of the Irvine Unified School District, the District and the City of Irvine cooperate in reserving the necessary land to accommodate future facilities. Additionally, the District is subject to the provisions contained in the California Government Code Sections 65401 and 65402.

The corresponding land use intensity and population standards are included in the Land Use Element statistical tables.

#### 7. Community College

This subcategory encompasses land under the jurisdiction of the Irvine Valley College District. Educational facilities, operations, research activities and related enterprises serve as the foundation for allowable uses.

The land use intensity and population standards reflect the existing long range plan for Irvine Valley College. Additionally, the District is subject to the provisions contained in the California Government Code Sections 65401 and 65402.

The corresponding land use intensity and population standards are included in the Land Use Element statistical tables.

#### 8. Private College

This subcategory reflects land under administration of a private foundation for educational purposes. Educational facilities, operation and related enterprises serve as the foundation for allowable uses.



Permitted land uses include: educational buildings and operations; administrative offices; research facilities in connection with college educational operations; faculty and student housing; commercial/retail related facilities; and conservation and open space activities.

The corresponding land use intensities and population standards are included in the Land Use Element statistical tables.

#### 9. Utilities

This subcategory includes land under the jurisdiction of public and quasi-public institutions which are compatible with the adopted land use designation. Utilities must be compatible with adjacent land uses.

Permitted land uses include, but are not limited to: energy substations; water reservoirs; and waste water treatment plants.

While the size of the utilities are the responsibility of the appropriate public or quasi-public institution, the City of Irvine cooperates in locating and siting facilities to ensure land use compatibility. Additionally, the institution is subject to the provisions contained in the California Government Code Sections 65401 and 65402.

The corresponding land use intensity and population standards are included in the Land Use Element statistical tables.

#### 10. Civic Center

This subcategory encompasses land under the jurisdiction of the City of Irvine, which is utilized for its City Hall complex and related uses. The City Hall complex and related facilities serve as the foundation for allowable uses.

Permitted land uses include, but are not limited: City Administration offices; police and fire offices; civic meeting hall; child care facilities; and offices of related agencies.

The land use intensity and population standards reflect the existing long range plan for the City of Irvine and are included in the Land Use Element statistical tables.

## 11. Public Facilities

Public Facilities support the operation of the surrounding land uses and usually occupy a very limited area. Public facilities can be integrated within the adopted land use designation without disrupting its normal operation.

Examples of Public Facilities are: libraries, museums, post offices, places of worship, fire and police stations, multi-modal center and day care centers. Other related uses are identified in the public facilities element. The Public Facilities Element contains the following service population and site size guideline information for the following uses.

Police - typically planning areas with a population of 10,000 to 20,000 require 1.5 officers per 1,000 persons and a facility size of 5.1 acres.

Fire Stations - typically planning areas with a population of 10,000 to 50,000 persons require 1.25 pump, and .75 truck with a facility size of 1 - 1.5 acres. To handle a district population of 70,000 to 100,000 people requires 8 pumps and 4 trucks. While the location and size of Fire Stations are the responsibility of County of Orange Fire Department, the County and City of Irvine cooperate in reserving necessary land to accommodate future facilities and acquiring the equipment.

Day Care Centers - typically neighborhoods with a population of 500 to 1,000 persons generate a user population of 500 children, requiring a .5 acre facility site.

Libraries - typically planning areas with a population of 10,000 to 20,000 persons generate 10,000 to 15,000 persons requiring a facility size of less than 1 acre. Currently, the County of Orange Public Library system utilizes a standard of five people for every one foot of library building. While the location and size of libraries are the responsibility of the County of Orange Public Library system, the County and City of Irvine cooperate in ensuring adequate facilities.

Additional service population and site size information for public facilities can be found in the Public Facilities Element (Chapter G).

f. Industrial

The Industrial land use category consists of two subcategories. Generally, the Industrial land uses are concentrated near the eastern and western edge of the City and represent the two primary employment centers under the City's land use authority. Each subcategory is discussed below:

1. Research and Industrial

The Research and Industrial subcategory is characterized by established industrial parks which have a unified character typically containing 1-3 story buildings surrounded by ample landscaping. Taller buildings are allowed, provided that they do not adversely affect air operations at Marine Corps Air Station El Toro.

The general types of activities found within the Research and Industrial subcategory are: the manufacture of materials or products, assembly of components, on-site waste management (see Waste Facility Land Use Element category and Chapter H), employee oriented retail services, construction, distribution or warehousing, administrative offices when associated with a manufacturing use, professional and business offices when related to a manufacturing use, and storage yards.

The corresponding land use intensity and population standards are included in the Land Use Element statistical tables.

2. Business and Industrial

The Business and Industrial subcategory is characterized by offices and industry with support commercial, mixed with high density housing (25 to 40 du/ac).

As contrasted to the Research and Industrial subcategory, the Business and Industrial subcategory has a highly urban character with a variety of activities which make this area active throughout a 24-hour day.

The general types of activities found within the Business and Industrial subcategory are high density housing; commercial uses such as retail sales facilities, automobile service stations, restaurants,



banks and other similar uses; hotel and motel; finance, professional/medical offices; industrial manufacturing; research and development; on-site waste management (see Waste Facility Land Use Element category and Chapter - H); public facilities; and other related uses.

The corresponding land use intensities and population standards are included in the Land Use Element statistical tables.

g. Military

The Military land use category encompasses all land under the jurisdiction of the Marine Corps Air Station El Toro and Tustin. Military air operations, training and related enterprises, and support activities serve as the foundation for the land uses allowed by the Federal government.

Permitted land uses include: Military air operations and training; administrative offices; supply and ordinance activities; industrial uses in connection with base operations; housing; community support activities and schools; Federally authorized commercial activities such as base exchanges, commissary and related enterprises; agricultural and other uses Federally authorized by outleases and licenses; and other military related activities.

This land use category prohibits commercial aviation.

Land use authority and corresponding regulatory activities are the responsibility of the Marine Corps Air Station El Toro and Tustin. The land use intensity and population standards in this category reflect existing long range plans for El Toro.

The corresponding land use intensity and population standards are included in the Land Use Element statistical tables.

h. Historical Resources

The Historical Resources land use category recognizes those resources of the City of Irvine that have or may have historical significance. Additional information and guidance about these and other resources is provided in the Cultural Resources Element (Chapter N).

#### i. Waste Facility

The Waste Facility land use category recognizes the need to ensure that adequate facilities, waste management techniques, and planning exist to address the volume and variety of waste generated by the land uses throughout the City of Irvine.

A waste facility may involve various land use activities related to the processing, treatment, handling, transfer or disposal of solid, liquid and hazardous wastes.

Waste facilities may include but are not limited to: Class I, II and III landfills, waste treatment and processing facilities, transfer stations and resource recovery facilities. Class II landfills are restricted to the areas depicted by the Landfill Overlay land use subcategory (see Conservation and Open Space Element).

A waste facility must be consistent with the County of Orange Integrated Waste Management Plan, County of Orange Hazardous Waste Management Plan, and the Waste Management Element of the Irvine General Plan (Chapter H). The waste facility land use category is intended to encourage and promote practices and technologies that will, in order of priority: reduce the use of hazardous substances and the generation of solid, liquid, and hazardous wastes at their source; recover and recycle, within the planning area in which they are generated, the remaining waste; and treat, within the planning area in which they are generated, those wastes not amenable to source reduction or recycling so that the environment and community health are not harmed by their ultimate release or disposal. Additional information and guidance about this matter is provided in the Waste Management Element.

#### j. Circulation

The Circulation land use category provides for varying transportation networks (e.g., general location and extent of existing and proposed major roads, highway and railroad lines) and capacities to serve other planned land uses. A brief description of the Circulation classification system is provided below. Additional information and guidance about this matter, correlation with other land use categories including building intensity and population density, transit routes, terminals, and other facilities is provided in the Circulation Element (Chapter D).

1. Freeway

A divided state highway with access restricted to grade separated interchanges. Freeways provide for movement of high volumes of inter-city traffic.

2. Transportation Corridor

A multi-modal facility with restricted access having a median of sufficient width to be utilized for fixed rail or high occupancy vehicle lanes, in addition to general purpose lanes. Transportation Corridors provide for movement of inter-city traffic.

3. Major Highway

A divided arterial highway of six to eight through lanes. Majors provide for 1) the movement of inter-village through traffic; and/or 2) the distribution of traffic to and from Freeways or Transportation Corridors.

4. Primary Highway

A divided arterial highway of four through lanes. Primaries provide for: 1) the movement of inter-village traffic; 2) the movement of traffic to and from activity centers within villages; and/or 3) the distribution of traffic to and from Freeways or Transportation Corridors.

5. Secondary Highway

An undivided arterial highway of four through lanes. Secondaries provide for: 1) the movement of inter-village traffic; and/or 2) the movement of traffic to and from activity centers within villages.

6. Commuter Highway

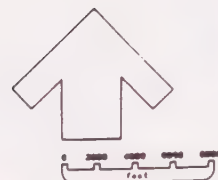
An arterial highway of two through lanes and an undivided median. Commuters provide for: 1) the movement of inter-village traffic, or 2) the movement of traffic to and from activity centers within villages. Two lane undivided roadways that exclusively provide for the collection or distribution of local traffic are defined as local roadways and are not shown in Figure D-5.



7. Railroad Lines

Rail lines providing for the transport of passengers and freight.

Revisions		
Date	By	Approved
10/24/89	J. Hsu	89-745



The General Plan land use acreage, dwelling units and square footage data are contained within the text.

City Boundary  
Sphere of Influence

### CONSERVATION OPEN SPACE

- Preservation
- Recreation
- Water Bodies
- Agriculture
- Golf Course Overlay
- Landfill Overlay

### RESIDENTIAL

- Estate<sup>(4)</sup>
- Low<sup>(4)</sup>
- Medium<sup>(4)</sup>
- Medium-High<sup>(4)</sup>
- High<sup>(4)</sup>

### MULTI USE<sup>(3)(4)</sup>

### COMMERCIAL

- General Commercial<sup>(4)</sup>
- Village Commercial<sup>(4)</sup>
- District Commercial<sup>(4)</sup>
- Specialty Commercial<sup>(4)</sup>
- Regional Commercial<sup>(4)</sup>
- Commercial Recreation<sup>(4)</sup>

### INSTITUTIONAL

- Institutional-General<sup>(3)(4)</sup>
- University of California<sup>(1)(2)(3)(4)</sup>
- UCI Inclusion Area<sup>(1)(2)(3)(4)</sup>
- Elementary School<sup>(1)(2)(3)(4)</sup>
- Intermediate School<sup>(1)(2)(3)(4)</sup>
- High School<sup>(1)(2)(3)(4)</sup>
- Community College<sup>(1)(2)(3)(4)</sup>
- Private School<sup>(4)</sup>
- Utilities<sup>(1)(2)(3)(4)</sup>
- Civic Center<sup>(4)</sup>
- Public Facilities<sup>(4)</sup>

### INDUSTRIAL

- Research & Industrial<sup>(4)</sup>
- Business & Industrial<sup>(3)(4)</sup>

### MILITARY<sup>(1)(3)(4)</sup>

### HISTORICAL RESOURCES

### WASTE FACILITY

### CIRCULATION

- Freeway
- Transportation Corridor
- Expressway
- Major Highway
- 8 Lanes
- Primary Highway
- Secondary Highway
- Commuter
- Railroad

(1) Land Use authority and corresponding regulatory activities are the responsibility of the government agencies which own the land.

(2) These governmental agencies are subject to the General Plan requirements contained within the California Government Code sections 65401 and 65402.

(3) These land use categories also allow residential development, as noted in the General Plan text.

(4) The Land Use Element Figures A-5 through A-10 establish and regulate land use building intensity standards. Building intensity standards are allocated by Planning Area.

# LAND USE ELEMENT



CITY OF IRVINE GENERAL PLAN

Figure A-1

FIGURE A-5  
MILITARY INTENSITY STANDARDS  
BY PLANNING AREA

(1) <u>PA</u>	(2)(3) <u>MILITARY</u>	(4) <u>TOTAL SQ.FT.</u>
51	5,487,000	5,487,000
Total	5,487,000	5,487,000

---

Footnotes:

1. Land use authority and related regulatory activities are controlled by the United States Department of Defense - Marine Corps Community Plans and Liaison Department.
2. The military designation provides for a variety of land uses, including residential which corresponds to the medium density residential category. For residential intensity refer to Figure A-10.
3. The intensity standard for the Military Land Use Element Category represents the maximum intensity according to the United States Department of Defense - Marine Corps Community Plans and Liaison Department (i.e. correspondence 6/1/88). Within this Planning Area, actual intensity is regulated by the United States Department of Defense.
4. The total square footage reflects non-residential structures and is an estimate.



FIGURE A-6  
MULTI-USE INTENSITY STANDARDS  
BY PLANNING AREA

PA	(1)(2) MULTI-USE	TOTAL SQ.FT.
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	119,850	119,850
11	0	0
12	470,000	470,000
13	0	0
14	0	0
15	198,539	198,539

PA (1) MULTI-USE

TOTAL SQ.FT.

16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	654,000	654,000
25	0	0
(3) 26	490,000	490,000
27	0	0
28	0	0
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0
35	0	0

<u>PA</u>	<u>(1)(2) MULTI-USE</u>	<u>TOTAL SQ.FT.</u>
36	0	0
37	0	0
38	0	0
39	0	0
50	0	0
51	0	0
Total	1,932,389	1,932,389

---

Footnotes:

1. This designation provides for a variety of land uses, including residential which corresponds to the high density residential category, and where noted in the General Plan text medium high (see Figure A-10).
2. These figures are regulatory caps for the planning area and as such are the intensity standards for the Multi-Use category.
3. Within Planning Area 26 the Multi-Use designation will allow up to 800 dwelling units in lieu of commercial at high or medium high densities development. For each dwelling unit provided the total allowable commercial development will be reduced by an amount equivalent to the traffic generated by the dwelling unit (in average daily vehicle trips).



PA  
SQ.FT.

(1)(2) MULTI-USE TOTAL

FIGURE A-7  
INDUSTRIAL INTENSITY STANDARDS  
BY PLANNING AREA

PA	<u>(1) RESEARCH AND INDUSTRIAL</u>	<u>(1)(2) BUSINESS AND INDUSTRIAL</u>	<u>TOTAL SQ.FT.</u>
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	4,385,184	0	4,385,184
10	2,822,921	0	2,822,921
11	0	0	0
12	2,871,081	0	2,871,081
13	10,434,893	0	10,434,893
14	0	0	0
15	0	0	0
16	0	0	0

<u>PA</u>	<u>(1) RESEARCH AND INDUSTRIAL</u>	<u>(1)(2) BUSINESS /</u>	<u>INDUSTRIAL</u>	<u>TOTAL SQ.FT.</u>
17	910,000		0	910,000
18	0		0	0
19	0		0	0
20	0		0	0
21	0		0	0
22	0		0	0
23	0		0	0
24	0		0	0
25	1,436,170		0	1,436,170
26	0		0	0
27	0		0	0
28	0		0	0
29	0		0	0
30	0		0	0
31	0		0	0
32	4,355,127		0	4,355,127
33	0		0	0
34	6,743,300		0	6,743,300
35	12,815,738		0	12,815,738
36	0	55,817,660		55,817,660

<u>PA</u>	<u>RESEARCH AND INDUSTRIAL</u>	<u>(1)(2) BUSINESS</u>	<u>INDUSTRIAL</u>	<u>TOTAL SQ.FT.</u>
37	0		0	0
38	0		0	0
39	0		0	0
50	0		0	0
51	0		0	0
Total	46,774,414		55,817,660	102,592,074

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**Footnotes:**

1. These figures are regulatory caps for the planning area and as such are the intensity standards for the Industrial subcategories.
2. This designation provides for a variety of land uses, and is based upon 63,346 AM (peak hour), 76,035 PM (peak hour) and 811,296 ADT as the maximum intensity regulating factor. (see Exhibit A-1).



FIGURE A-8  
COMMERCIAL INTENSITY STANDARDS  
BY PLANNING AREA

<u>PA</u>	<u>(1)General Commercial</u>	<u>(1)Village Commercial</u>	<u>(1)District Commercial</u>	<u>(1)Specialty Commercial</u>	<u>(1)(2)Regional Commercial</u>	<u>(1)Commercial Recreation</u>	<u>Total sq. ft.</u>
(3)1	23,769	0	0	0	0	0	23,769
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
(3)4	0	0	255,077	0	0	0	255,077
5	0	150,000	0	0	0	0	150,000
6	0	0	0	0	0	0	0
(3)7	0	72,680	0	0	0	0	72,680
8	21,620	285,200	150,000	371,500	0	0	828,320
9	0	0	0	0	0	0	0
10	296,530	73,560	0	517,078	0	0	887,168
11	175,732	52,376	314,280	0	0	0	542,388
12	955,000	150,000	0	12,000	0	0	1,117,000
13	83,618	0	0	0	0	0	83,618
14	145,000	179,906	451,094	0	0	0	776,000

<u>PA</u>	<u>(1) General Commercial</u>	<u>(1) Village Commercial</u>	<u>(1) District Commercial</u>	<u>(1) Special Commercial</u>	<u>(1)(2) Regional Commercial</u>	<u>(1) Commercial Recreation</u>	<u>Total sq. ft.</u>
15	672,067	224,413	0	0	0	0	896,480
16	0	0	0	0	0	0	0
17	0	0	300,000	0	0	0	300,000
18	0	0	0	0	0	0	0
19	38,410	0	0	58,480	0	197,500	294,390
20	0	173,542	0	0	0	0	173,542
21	0	0	0	0	0	0	0
22	0	60,000	0	0	0	0	60,000
23	0	0	0	0	0	0	0
24	0	68,953	0	0	0	0	68,953
25	0	0	0	0	0	0	0
26	0	0	110,000	0	0	0	110,000
27	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0
32	1,398,947	0	0	0	0	0	1,398,947
33	0	0	0	0	10,188,980	0	10,188,980

PA	(1)General Commercial	(1)Village Commercial	(1)District Commercial	(1)Specialty Commercial	(1)(2)Regional Commercial	(1)Commercial Recreation	Total sq. ft.
34	1,324,430	0	0	0	0	0	1,324,430
35	823,664	0	0	86,300	0	0	909,964
36	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0
39	0	0	0	0	0	30,639	30,639
50	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0
Total	5,958,787	1,490,630	1,580,451	1,045,358	10,188,980	228,139	20,492,345

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Footnotes:

1. These figures are regulatory caps for the planning area and as such are the intensity standards for the Commercial subcategories.
2. This designation provides for a variety of land uses which are regulated by the Irvine Center Development Agreement and Objective A-4 of the Land Use Element text.

The development intensity is an estimate derived from the Irvine Center Development Agreement adopted August, 1983. The development intensity was determined by converting the allowable points (6,200) to gross leasable square feet and then multiplying by .15 to achieve a gross floor area. As such the Development Agreement is estimated to allow approximately 8,388,980 square feet of gross floor area. An additional 1,800,000 square feet of gross floor area is permitted subject to Objective A-4 of the Land Use Element. The actual development intensity may exceed these estimates subject to the traffic provisions contained in the Development Agreement.

3. Land use authority and related regulatory activities are controlled by the County of Orange. Commercial categories, acreage, and square footage totals are based on the City of Irvine General Plan and do not reflect the County of Orange General Plan.



[illegible]

PA	(1)(General Inst.	(2) UCI	(3) Incl. Area	(1)(2) Elem. School	(1)(2) Intermed. School	(1)(2) High school	(2) Comm. College	(2) Priv. College	(1)(2) Util.	(2) Civic Ctr.	(1)(Public Facil.	Total sq. ft.
23	27,230	0	0	0	0	0	0	0	85,000	0	0	112,230
24	0	0	0	0	0	0	0	0	0	0	10,000	10,000
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	210,740	0	0	0	0	0	0	0	0	0	0	210,740
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	570,503	0	0	0	0	0	0	0	0	0	570,503
30	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0
35	60,000	0	0	0	0	0	0	0	0	0	0	60,000
36	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0
50	0	9,810,293	0	0	0	0	0	0	0	0	0	9,810,293
51	0	0	0	0	0	0	0	0	0	0	0	0
Total	1,859,639	10,380,796	0	764,851	380,535	936,070	150,000	310,980	435,370	208,000	404,763	15,831,004

#### FOOTNOTES:

- (1) This designation provides for a variety of land uses which are allowed in all land use categories. The development intensity for this designation is in addition to the development intensity allowed in the adopted land use category. Adjustments to square footage will be included in the development monitoring program and reflected in the statistical tables through annual general plan technical updates. Institutional uses will be deemed consistent with the General Plan if:

- a. all significant environmental impacts are mitigated to a level of insignificance; and,
  - b. infrastructure capacity under existing and future (General Plan build-out) conditions can accommodate additional development in the areas of circulation, fire, police, water and flood control services; or
  - c. development intensity under the adopted land use category is exchanged for intensity to accommodate institutional development in the areas of circulation, fire, police, water, and flood control services within the same planning area.
- (2) These figures are regulatory caps for specific Institutional sub-categories in the planning area and as such are the intensity standards for the Institutional sub-categories except as noted in Footnote 1. Within each planning area, actual intensity is regulated by the appropriate agencies involved (see land use definitions for guidance).
- (3) UCI intensity standards are based on the University's Long-Range Plan (correspondence 5/16/88).



FIGURE A-10  
RESIDENTIAL INTENSITY<sup>(1)</sup>  
By Planning Area

PA	Estate .1 to 1 du/ac	Low 1 to 5 du/ac	Medium 5 to 10 du/ac	Medium High 10 to 25 du/ac	High 25 to 40 du/ac	Multi-Use 25 to 40 du/ac	Inst. 25 to 40 du/ac	Bus. & Ind. 25 to 40 du/ac	Military 5 to 10 du/ac	(3) Total du
(7) 1	0 to 247	154 to 4380	0	0	0	0	0	0	0	154 to 4627
(7) 2	0 to 165	122 to 3121	0	0	0	0	0	0	0	122 to 3286
3	0	0	0	0	0	0	0	0	0	0
(7) 4	0	0	1366 to 2733	66 to 167	625 to 1000	0	0	0	0	2057 to 3900
5	0	226 to 853	505 to 670	890 to 1362	0	0	0	0	0	1621 to 2885
(7) 6	0 to 441	0	0	0	0	0	0	0	0	0 to 441
(7) 7	0	0	1199 to 2398	792 to 1979	230 to 368	0	0	0	0	2221 to 4745
8	0	327 to 1637	2365 to 4731	755 to 1888	280 to 449	0	0	0	0	3727 to 8705
9	0	0	0	0	0	0	0	0	0	0
10	0	0	1215 to 2430	350 to 1325	0	187 to 300	0	0	0	1752 to 4055
11	0	0	2212 to 4516	936 to 3169	0	0	0	0	0	3148 to 7685
(6) 12	0	0	300 to 600	2000 to 3712	350 to 500	250 to 350	0	0	0	2900 to 5162
13	0	0	0	0	0	0	0	0	0	0
14	0	169 to 870	982 to 1065	2657 to 3725	0	0	0	0	0	3808 to 5660
15	0	0	3568 to 8710	1180 to 2791	384 to 615	125 to 359	0	0	0	5257 to 12475
16	0	0	0	0	0	0	0	0	0	0
(8) 17	0	0	840 to 1680	140 to 350	0	0	0	0	0	980 to 2030
(8) 18	0	0	100 to 200	220 to 550	0	0	0	0	0	320 to 750
19	0	0	0	1180 to 2835	0	0	0	0	0	1180 to 2835
20	0	93 to 465	1230 to 2460	340 to 850	0	0	0	0	0	1663 to 3775
21	0	785 to 3923	60 to 120	340 to 1005	0	0	206 to 330	0	0	1391 to 5378
(8) 22	0	0	1135 to 2270	420 to 1050	0	0	0	0	0	1555 to 3320
23	0	0	0	0	625 to 1000	0	25 to 40	0	0	650 to 1040
24	0	0	0	1155 to 2889	0	0	0	0	0	1155 to 2889
25	0	0	0	0	0	0	0	0	0	0
(2,6,8) 26	0	0	210 to 420	632 to 1580	0	(2,3) 0 to 800	0	0	0	842 to 2800
(8) 27	0	48 to 250	487 to 975	510 to 1275	0	0	0	0	0	1045 to 2500
28	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0

PA	(1) Estate .1 to 1 du/ac	Low 1 to 5 du/ac	Medium 5 to 10 du/ac	Medium High 10 to 25 du/ac	High 25 to 40 du/ac	Multi-Use 25 to 40 du/ac	Inst. 25 to 40 du/ac	Bus. & Ind. 25 to 40 du/ac	Military 5 to 10 du/ac	(3) Total du
33	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0 to 3,896	0	0 to 3896
37	0	0	0	0	0	0	0	0	0	0
(5) 38	0	0	782 to 896	1704 to 3374	0	0	0	0	626 to 1253	3112 to 5523
39	0	0	0	0	0	0	0	0	0	0
(4) 50	0	0	0	0	0	0	0 to 9500	0	0	0 to 9500
(5) 51	0	0	0	0	0	0	0	0	2626 to 5252	2626 to 5252
TOTAL	0 to 853	1924 to 15499	18556 to 36874	16267 to 35876	2494 to 3932	562 to 1809	231 to 9870	0 to 3896	3252 to 6505	43286 to 115114

FOOTNOTES:

- (1) The General Plan residential intensity ranges are based on estimated gross figures and may be adjusted to reflect more accurate information at subsequent planning levels.
- (2) Within Planning Area 26, the Multi-Use designation will allow up to 800 dwelling units (i.e., either in the high or medium-high categories) in lieu of commercial development provided that the total allowable commercial development is reduced by an amount equivalent to the traffic generated by the dwelling unit in average daily vehicle trips (see Table A-5 for Multi-Use square footage total).
- (3) The permitted range of dwelling units (low-high) within a Planning Area and Residential category may be less than that allowed by the available acreage within the Planning Area and Residential Category.
- (4) Land use authority and related regulatory activities are controlled by the University of California. Residential dwelling unit totals are based on the University's Long-Range Development Plan.
- (5) Land use authority and related regulatory activities are controlled by the United States Department of Defense - Marine Corps - Residential dwelling unit totals were obtained from the Marine Corps - Community Plans and Liaison Department.
- (6) Within the Multi-Use Land Use category for Planning Areas 12 and 26 Medium High density residential (10 to 25 du/ac) is permitted.
- (7) Land use authority and related regulatory activities are controlled by the County of Orange. Residential categories, acreage and dwelling unit totals are based on the City of Irvine General Plan and do not reflect the County of Orange General Plan.
- (8) The maximum number of residential dwelling units and the allocation of dwelling units within density ranges for Planning Areas, 17, 18, 22, 26, and 27 may be revised in accordance with Objectives A-2(g) and L-1(g).

FIGURE A-11  
MILITARY ACREAGE  
BY PLANNING AREA

<u>PA</u>	<u>(1)(3)(4) MILITARY</u>	<u>(2) TOTAL ACRES</u>
38	124	124
51	4,710	4,710
Total	4,834	4,834

Footnotes:

1. The General Plan Military intensity is based on a gross acre figure.
2. The acreage total by General Plan Military category is an estimate derived from the Land Use Element map using a computerized planimeter. As such the acreage estimate reflects a gross acre figure. The gross acre figure includes General Plan Circulation right-of-ways, utility easements and flood control right-of-ways, etc. Therefore, the acre figure is not intended to be a regulatory minimum or maximum with respect to Land Use Element designation. The gross acre figure may be revised as more accurate information is obtained from subsequent development applications. The acre figure will be adjusted to conform to precise City boundaries, road alignments, slope conditions and other general plan policies and guidelines through the development monitoring program.
3. Land use authority and related regulatory activities are controlled by the United States Department of Defense - Marine Corps Community Plans and Liaison Department.
4. The military designation provides for a variety of land uses. The acreage total reflects the entire land holding of the Marine Corps rather than specific land uses. However, approximately 300 acres are shown on the Land Use Element diagram as agriculture.



FIGURE A-12  
MULTI-USE ACREAGE  
BY PLANNING AREA

<u>PA</u>	<u>(1) MULTI-USE</u>	<u>(2) TOTAL ACRES</u>
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	32	32
11	0	0
12	51	51
13	0	0
14	0	0

PA

(1) MULTI-USE

(2) TOTAL ACRES

15	38	38
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	24	24
25	0	0
(3) 26	53	53
27	0	0
28	0	0
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0

PA (1) MULTI-USE

(2) TOTAL ACRES

35	0	0
36	0	0
37	0	0
38	0	0
39	0	0
50	0	0
51	0	0
Total	198	198

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Footnotes:

1. The General Plan Multi-Use intensity is based on a gross acre figure.
2. The acreage total by General Plan Multi-Use is an estimate derived from the Land Use Element map using a computerized planimeter. As such the acreage estimate reflect a gross acre figure. The gross acre figure includes General Plan circulation right-of-way, utility easements and flood control right-of-ways, etc. Therefore the acre figure is not intended to be regulatory a minimum or maximum with respect to the Land Use Element designation. The gross acre figure may be revised as more accurate information is obtained from subsequent development applications. The acre figure will be adjusted to conform to precise City boundaries, road alignments, slope conditions, and other general plan policies and guidelines through the development monitoring program.
3. Within Planning Area 26 the Multi-Use designation will allow up to 800 dwelling units in either the high or medium-high categories in lieu of commercial development. For each dwelling unit provided the total allowable commercial development will be reduced by an amount equivalent to the traffic generated by the dwelling unit (in average daily vehicle trips).



FIGURE A-13  
INDUSTRIAL ACREAGE  
BY PLANNING AREA

<u>PA</u>	<u>(1) RESEARCH AND INDUSTRIAL</u>	<u>(1) BUSINESS AND INDUSTRIAL</u>	<u>(2) TOTAL ACRES</u>
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	307	0	307
10	140	0	140
11	0	0	0
12	218	0	218
13	716	0	716
14	0	0	0
15	0	0	0

<u>PA</u>	<u>(1) RESEARCH AND INDUSTRIAL</u>	<u>(1) BUSINESS</u>	<u>INDUSTRIAL</u>	<u>(2) TOTAL ACRES</u>
16	0		0	0
17	161		0	161
18	0		0	0
19	0		0	0
20	0		0	0
21	0		0	0
22	0		0	0
23	0		0	0
24	0		0	0
25	124		0	124
26	0		0	0
27	0		0	0
28	0		0	0
29	0		0	0
30	0		0	0
31	0		0	0
32	414		0	414
33	0		0	0
34	460		0	460
35	964		0	964

<u>PA</u>	<u>(1) RESEARCH AND INDUSTRIAL</u>	<u>(1) BUSINESS / INDUSTRIAL</u>	<u>(2) TOTAL ACRES</u>
36	0	2,827	2,827
37	0	0	0
38	0	0	0
39	0	0	0
50	0	0	0
51	0	0	0
Total	3,504	2,827	6,331

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**Footnotes:**

1. The General Plan Industrial intensities are based on a gross acre figure.
2. The acreage total by General Plan Industrial category is an estimate derived from the Land Use Element map using a computerized planimeter. As such the acreage estimates reflect gross acre figures. The gross acre figures include General Plan circulation right-of-ways, utility easements, flood control right-of-ways, etc. Therefore acre figures are not intended to be regulatory minimums or maximums with respect to Land Use Element designations. Gross acre figures may be revised as more accurate information is obtained from subsequent development applications. The acre figures will be adjusted to conform to precise City boundaries, road alignment, slope conditions and other general plan policies and guidelines through the development monitoring program.



FIGURE A-14  
COMMERCIAL ACREAGE  
BY PLANNING AREA

<u>PA</u>	<u>(1)General Commercial</u>	<u>(1)Village Commercial</u>	<u>(1)District Commercial</u>	<u>(1)Specialty Commercial</u>	<u>(1)Regional Commercial</u>	<u>(1)Commercial Recreation</u>	<u>(2)Total Acres</u>
(3)1	15	0	0	0	0	0	15
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
(3)4	0	0	41	0	0	0	41
5	0	15	0	0	0	0	15
6	0	0	0	0	0	0	0
(3)7	0	22	0	0	0	0	22
8	3	32	35	56	0	0	126
9	0	0	0	0	0	0	0
10	63	16	0	62	0	0	141
11	22	15	39	0	0	0	76
12	88	17	0	46	0	0	151
13	17	0	0	0	0	0	17
14	35	16	48	0	0	0	99

<u>PA</u>	<u>(1) General Commercial</u>	<u>(1) Village Commercial</u>	<u>(1) District Commercial</u>	<u>(1) Special Commercial</u>	<u>(1) Regional Commercial</u>	<u>(1) Commercial Recreation</u>	<u>(2) Total Acres</u>
15	59	31	0	0	0	0	90
16	0	0	0	0	0	0	0
17	0	0	35	0	0	0	35
18	0	0	0	0	0	0	0
19	5	0	0	13	0	16	34
20	0	36	0	0	0	0	36
21	0	0	0	0	0	0	0
22	0	10	0	0	0	0	10
23	0	0	0	0	0	0	0
24	0	19	0	0	0	0	19
25	0	0	0	0	0	0	0
26	0	0	35	0	0	0	35
27	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0
32	94	0	0	0	0	0	94
33	0	0	0	0	544	0	544

<u>PA</u>	<u>(1) General Commercial</u>	<u>(1) Village Commercial</u>	<u>(1) District Commercial</u>	<u>(1) Special Commercial</u>	<u>(1) Regional Commercial</u>	<u>(1) Commercial Recreation</u>	<u>(2) Total Acres</u>
34	90	0	0	0	0	0	90
35	62	0	0	54	0	0	116
36	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0
39	0	0	0	0	0	577	577
50	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0
<b>Total</b>	<b>553</b>	<b>229</b>	<b>233</b>	<b>231</b>	<b>544</b>	<b>593</b>	<b>2,383</b>

**Footnotes:**

1. The General Plan Commercial intensities are based on a gross acre figure.
2. The acreage total by General Plan Commercial category is an estimate derived from the Land Use Element map using a computerized planimeter. As such the acreage estimates reflect gross acre figures. The gross acre figures include General Plan Circulation right-of-ways, utility easements and flood control right-of-ways, etc. Therefore, acre figures are not intended to be regulatory minimums or maximums with respect to Land Use Element designations. Gross acre figures may be revised as more accurate information is obtained from subsequent development applications. The acre figures will be adjusted to conform to precise City boundaries, road alignments, slope conditions and other general plan policies and guidelines through the development monitoring program.
3. Land use authority and related regulatory activities are controlled by the County of Orange. Commercial categories, acreage, and square footage totals are based on the City of Irvine General Plan and do not reflect the County of Orange General Plan.



FIGURE A-15  
INSTITUTIONAL ACREAGE  
BY PLANNING AREA

<u>PA</u>	<u>(1) General Inst.</u>	<u>(1) UCI</u>	<u>(1) Incl. Area</u>	<u>(1) Elem. School</u>	<u>(1) Intermed. School</u>	<u>(1) High School</u>	<u>(1) Comm. College</u>	<u>(1) Priv. College</u>	<u>(1) Util.</u>	<u>(1) Civic Ctr.</u>	<u>(1) Public Facil.</u>	<u>(2) Total Acres</u>
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
(3) 4	21	0	0	0	0	0	0	0	0	0	0	21
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
(3) 7	0	0	0	0	0	30	0	0	0	0	0	30
8	0	0	0	31	14	0	0	0	0	0	0	45
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	10	0	0	0	0	0	0	0	10
11	16	0	0	32	26	40	0	0	0	0	10	124
12	25	0	0	0	0	0	100	0	0	0	7	132
13	0	0	0	0	0	0	0	0	33	0	0	33

<u>PA</u>	<u>Gen. Inst.</u>	<u>(1) UCI</u>	<u>(1) Incl. Area</u>	<u>(1) Elem. School</u>	<u>(1) Intermed. School</u>	<u>(1) Hi School</u>	<u>(1) Comm. College</u>	<u>(1) Priv. College</u>	<u>(1) Util.</u>	<u>(1) Civic Ctr.</u>	<u>(1) Pub Facil.</u>	<u>(2) Total Acres</u>
14	0	0	0	15	0	0	0	0	0	14	0	29
15	13	0	0	32	29	21	0	0	0	0	29	124
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	5	5
20	0	0	0	16	20	0	0	0	0	0	23	59
21	0	0	0	18	0	40	0	65	0	0	5	128
22	0	0	0	0	0	0	0	0	0	0	0	0
23	17	0	0	0	0	0	0	0	36	0	0	53
24	0	0	0	0	0	0	0	0	0	0	3	3
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	16	0	0	0	0	0	0	0	1	0	0	17
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	55	0	0	0	0	0	0	0	0	0	55
30	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0

<u>PA</u>	(1) <u>General Inst.</u>	(1) <u>UCI</u>	(1) <u>Incl. Area</u>	(1) <u>Elem. School</u>	(1) <u>Intermed. School</u>	(1) <u>Hig School</u>	(1) <u>Comm. College</u>	(1) <u>Priv. College</u>	(1) <u>Util.</u>	(1) <u>Civic Ctr.</u>	(1) <u>Publ Facil.</u>	(2) <u>Total Acres</u>
33	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0
35	98	0	0	0	0	0	0	0	0	0	0	98
36	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0
50	0	810	571	0	0	0	0	0	0	0	0	1,381
51	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	206	865	571	154	89	131	100	65	70	14	82	2,347

**Footnotes:**

1. The General Plan Institutional intensities are based on a gross acre figure.
2. The acreage total by General Plan Institutional category is an estimate derived from the Land Use Element map using a computerized planimeter. As such the acreage estimates reflect gross acre figures. The gross acre figures include General Plan circulation right-of-ways, utility easements, flood control right-of-ways, etc. Therefore acre figures are not intended to be regulatory minimums or maximums with respect to Land Use Element designations. Gross acre figures may be revised as more accurate information is obtained from subsequent development applications. The acre figures will be adjusted to conform to precise City boundaries, road alignment, slope conditions and other general plan policies and guidelines through the development monitoring program.
3. Land use authority and related regulatory activities are controlled by the County of Orange. Institutional categories, acreage, and square footage totals are based on the City of Irvine General Plan and do not reflect the County of Orange General Plan.

FIGURE A-16

## RESIDENTIAL ACREAGE

## BY PLANNING AREA

PA	(1)(3) ESTATE 0-.2 du/ac	(1)(3) LOW .2-5 du/ac	(1)(3) MEDIUM 5-10 du/ac	(1)(3) MEDIUM-HIGH 10-25 du/ac	(1)(3) HIGH 25-40 du/ac	(1)(3)(4) MULTI-USE 25 to 40 du/ac	(1)(3)(4) INST. 25 to 40 du/ac	(1)(3)(4) BUS. & IND. 25 to 40 du/ac	(1)(3)(4) MILITARY 5 to 10 du/ac	(2) TOTAL ACRES
(5)1	749	768	0	0	0	0	0	0	0	1,517
(5)2	826	609	0	0	0	0	0	0	0	1,435
3	0	0	0	0	0	0	0	0	0	0
(5)4	0	0	343	18	38	0	0	0	0	399
5	0	201	94	81	0	0	0	0	0	376
(5)6	1,804	0	0	0	0	0	0	0	0	1,804
(5)7	0	0	373	132	12	0	0	0	0	517
8	0	256	893	202	121	0	0	0	0	1,472
(5)9	0	0	0	0	0	0	0	0	0	0
10	0	0	397	21	0	32	0	0	0	450
11	0	0	591	313	0	0	0	0	0	904
12	0	0	69	328	16	9	0	0	0	422
(5)13	0	0	0	0	0	0	0	0	0	0
14	0	169	196	265	0	0	0	0	0	630



PA	(1)(3) E ATE 0-.2 du/ac	(1)(3) LOW .2-5 du/ac	(1)(3) MEDIUM 5-10 du/ac	(1)(3) MEDIUM-HIGH 10-25 du/ac	(1)(3) HIGH 25-40 du/ac	(1)(3)(4) MULTI-USE 25 to 40 du/ac	(1)(3)(4) INST. 25 to 40 du/ac	(1)(3)(4) BUS. & IND. 25 to 40 du/ac	(1)(3)(4) MILITARY 5 to 10 du/ac	(2) TOTAL ACRES
15	0	0	1,243	65	40	8	0	0	0	1,356
16	0	0	0	0	0	0	0	0	0	0
17	0	0	300	40	0	0	0	0	0	340
18	0	0	35	138	0	0	0	0	0	173
19	0	0	0	151	0	0	0	0	0	151
20	0	111	407	24	0	0	0	0	0	542
21	0	968	10	54	0	0	8	0	0	1040
22	0	0	752	151	0	0	0	0	0	903
23	0	0	0	0	25	0	2	0	0	27
24	0	0	0	205	0	0	0	0	0	205
25	0	0	0	0	0	0	0	0	0	0
26	0	0	215	326	0	40	0	0	0	581
27	0	157	518	201	0	0	0	0	0	876
28	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0

	(1) ES 0-.2 du/ac	(1)(3) LOW .2-5 du/ac	(1)(3) MEDIUM 5-10 du/ac	(1)(3) MEDIUM-HIGH 10-25 du/ac	(1)(3) HIG. 25-40 du/ac	(1)(3)(4) MULTI-USE 25 to 40 du/ac	(1)(3)(4) INST. 25 to 40 du/ac	(1)(3)(4) BUS. & IND. 25 to 40 du/ac	(1)(3)(4) MILITAR 5 to 10 du/ac	(2) TOTAL ACRES
PA										
35	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	90	0	90
37	0	0	0	0	0	0	0	0	0	0
38	0	0	222	146	0	0	0	0	124	492
39	0	0	0	0	0	0	0	0	0	0
(6) 50	0	0	0	0	0	0	548	0	0	548
(7) 51	0	0	0	0	0	0	0	0	294	294
Total	3,379	3,239	6,658	2,861	252	89	558	90	418	17,544

**Footnotes:**

1. The General Plan residential density ranges are based on a gross acre figure.
2. The acreage total by General Plan residential category is an estimate, which was derived from the Land Use Element map using a computerized planimeter. As such the acreage estimates reflect gross acre figures. The gross acre figures include General Plan circulation right-of-ways, utility easements, flood control right-of-ways, etc. Therefore acre figures are not intended to be regulatory minimums or maximums with respect to Land Use Element designations. Gross acre figures may be revised as more accurate information is obtained from subsequent development applications. The acre figures will be adjusted to conform to precise City boundaries, road alignments, slope conditions and other general plan policies and guidelines through the development monitoring program.
3. The dwelling unit range (low-high) is consistent with the General Plan Land Use Element Figure A-10 figures, which established the overall permitted range of dwelling units per residential category. The actual dwelling unit range (low-high) may be less than that allowed by the available acreage within that category.
4. These designations provide for a variety of land uses, including residential which corresponds to the high density residential category, and where noted in the General Plan text medium-high (i.e., A10). The acreage total devoted for residential purposes is a portion of the overall acreage and includes only existing residential acres.
5. Land use authority and related regulatory activities are controlled by the County of Orange. Residential categories, acreage and dwelling unit totals are based on the City of Irvine General Plan and do not reflect the County of Orange General Plan.
6. Land use authority and related regulatory activities are controlled by the University of California. Residential categories acreage and dwelling unit totals are based on the University's Long Range Development Plan.
7. Land use authority and related regulatory activities are controlled by the United States Department of Defense - Marine Corps. Residential category, acreage and dwelling totals were obtained from the Marine Corps - Community Plans and Liaison Department.

FIGURE A-17

CONSERVATION AND OPEN SPACE ACREAGE  
BY PLANNING AREA

<u>PA</u>	<u>Preservation</u>	<u>Recreation</u> <sup>(2)</sup>	<u>Water Bodies</u>	<u>Agriculture</u>	<sup>(3)</sup> <u>Golf Course Overlay</u>	<sup>(3)</sup> <u>Landfill Overlay</u>	<sup>(1)</sup> <u>Total Acres</u>
(5) 1	530	0	0	0	0	0	530
(5) 2	487	140	37	0	0	0	664
3	3101	732	0	0	0	725	3833
(5) 4	0	96	0	0	0	0	96
5	0	25	0	348	0	0	373
6	0	221	25	1123	0	0	1369
7	0	46	0	0	0	0	46
8	0	29	0	99	0	0	128
9	0	93	0	1692	0	0	1785
10	0	82	0	0	0	0	82
11	0	86	0	0	0	0	86
12	176	165	0	0	0	0	341
13	0	72	0	0	0	0	72
14	0	80	0	0	0	0	80
15	0	121	61	0	0	0	182

PA	<u>Preservation</u>	<u>Recreation</u> <sup>(2)</sup>	<u>Water Bodies</u>	<u>Agriculture</u>	<sup>(3)</sup> <u>Golf Course Overlay</u>	<sup>(3)</sup> <u>Landfill Overlay</u>	<sup>(1)</sup> <u>Total Acres</u>
16	622	0	0	0	0	0	622
17	255	54	0	0	0	0	309
18	410	0	0	0	0	0	410
19	0	200	0	0	0	9	200
20	0	16	0	0	0	0	16
21	0	717	34	0	0	0	751
22	35	0	0	0	620	0	35
23	343	0	0	0	0	0	343
24	112	0	0	0	0	0	112
25	0	0	0	0	0	0	0
26	171	370	19	0	0	370	560
27	478	72	0	0	0	72	550
28	2487	0	0	0	0	0	2487
29	283	74	0	0	0	33	357
30	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0
33	4	0	0	0	0	0	4
34	25	0	0	0	0	0	25



PA	Preservation	Recreation <sup>(2)</sup>	Water Bodies	Agriculture	<sup>(3)</sup> Golf Course Overlay	<sup>(3)</sup> Landfill Overlay	<sup>(1)</sup> Total Acres
35	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0
38	0	11	0	0	0	0	11
39	17	0	10	0	0	0	27
50	0	0	0	0	0	0	0
<sup>(4)</sup> 51	0	0	0	300	0	0	300
Total	9,536	3,502	186	3,562	<sup>(2)</sup> 620	<sup>(2)</sup> 1200	16,786

**Footnotes:**

1. The acreage total by General Plan Conservation and Open Space category is an estimate derived from the Land Use Element map using a computerized planimeter. As such the acreage estimates reflect gross acre figures. The gross acre figures include General Plan circulation right-of-ways, utility easements, flood control rights of-ways, etc. Therefore, acre figures are not intended to be regulatory standards with respect to Land Use Element designations. Gross acre figures may be revised as more accurate information is obtained from subsequent development applications. The acre figures will be adjusted to conform to precise City boundaries, road alignments, slope conditions and other General Plan policies and guidelines through the development monitoring program.
2. Community Parks and some open space spines located within Recreation land use category in Planning Areas 4, 5, 7, 10, and 38 are conceptual. Such land uses approximations and are enlarged for graphic clarity. Unless specified in the Conservation and Open Space Element or the park code, the size of the open space spines or Community Parks will be determined concurrent with subsequent development applications.
3. Overlay acreage is not included in acreage totals.
4. The military designation provides for a variety of land uses. However, approximately 300 acres are shown on the Land Use Element diagram as Agriculture.
5. Community park acreage required by the development of Planning Area 5 (approximately 17 acres) will be reserved and transferred into either Planning Areas 1, 2, or 4. The exact community park acreage will be determined prior to the approval of the master tentative tract map for Planning Area 5.

FIGURE A-18

## Population Standards by Land Use Element Category

<u>LAND USE ELEMENT CATEGORY</u>		<u>EMPLOYEES PER THOUSAND SQ. FT.</u>	<u>EMPLOYEES PER STUDENT</u>
(1)(2)	<u>Military</u>	2.7	0
(1)(2)	<u>Multi-Use</u>	2.7	0
(1)(2)	<u>Industrial</u>		
	Research & Industrial	2.7	0
	Business & Industrial	2.7	0
(2)	<u>Commercial</u>		
	General	2.7	0
	Village	2.7	0
	District	2.7	0
	Specialty	2.7	0
	Regional	2.7	0
	Commercial Recreation	2.7	0
(1)	<u>Institutional</u>		
	General	2.7	0
	UCI	2.7	0
	UCI inclusion area	N/A	N/A
	Elementary School	0	.05
	Intermediate School	0	.05
	High School	0	.05
	Community College	0	.05
	Private College	0	.05
	Utilities	2.7	0
	Civic Center	2.7	0
	Public Facilities	N/A	N/A
		<u>RESIDENTS PER D.U.</u>	<u>RESIDENTS PER ACRE</u>
(2)	<u>Residential</u>		
	Estate	3.25	0 - 1
	Low	3.09	1 - 15
	Medium	2.23	11 - 22
	Medium High	2.12	21 - 53
	High	2.03	51 - 81
	Military	2.23	11 - 22
	Multi-Use	2.03	51 - 81
	UCI	N/A	N/A
	Private College	2.03	51 - 81

---

Footnotes:

1. Population estimates for Land Use Element categories allowing residential uses are correlated to Land Use Element residential building intensity standards (du/ac). The population estimates are based on the 1980 Federal Census, and data annually updated from the State Department of Finance. Additionally, the population estimates have been adjusted based on appropriate data from the Irvine Unified School District.
2. Employment estimates for Land Use Element categories allowing non-residential uses are correlated to Land Use Element non-residential building intensity standards (sq. ft.) .

The employment estimates are based on a survey completed by the City of Irvine in 1984. The survey reviewed built non-residential land uses (i.e., employees per thousand square feet). The survey involved employment centers in Irvine, Newport Beach, Costa Mesa, Santa Ana and Tustin.

The General Plan employment intensities were derived from the survey results by listing permitted land uses and corresponding employment intensity for each land Use element category and averaging the employment intensities.

3. Population and employment estimates are non-regulatory data which serve as the first level of information to: determine service level demands, public facility needs and infrastructure sizing requirements.

Since the population and employment data are estimates which are utilized in day-to-day decision making, and long-range planning, public facility and infrastructure requirements, the estimates will be updated through the Development Monitor Program (i.e., Objective A-1).

GOAL A

LAND USE ELEMENT

---

Establish relationships between land uses that meet basic human needs, are efficient and harmonious, and balance costs and revenues over time.

---

To achieve this goal, the City of Irvine has adopted the following objectives and implementing actions:



## OBJECTIVE A-1 DEVELOPMENT MONITORING PROGRAM

Develop a program consistent with State law and City policies which monitors development and evaluates the status of General Plan objectives.

### Implementing Actions:

- a. Report to the City Council on a regular basis on the status of General Plan objectives including but not limited to:
  - fiscal ratios
  - jobs-to-housing balance
  - circulation levels of service
  - phasing of land uses
  - phased dedication of open space
  - maintenance of General Plan database
  - circulation phasing
- b. Ensure that specific monitoring programs are coordinated and utilize the same database, including:
  - Irvine Business Complex Tracking System
  - Irvine Medical and Science Computer Traffic Monitoring
  - Irvine Technology Center Traffic Monitoring
  - Irvine Center Development Agreement Monitoring
- c. Coordinate population, housing, employment, and land use projections with the State Department of Finance; Southern California Association of Governments; the County of Orange Development Monitoring Program; school districts; and the Irvine Ranch Water District.

Regional and local planning information sources regarding employment, housing and population projections will serve as regional Planning Information sources providing a regional prospective for Citywide planning and development monitoring programs including but not limited to:

- Budgeting and financial forecasting
- CIP budget and programs
- General Plan Fiscal Impact Model
- Irvine Transportation Analysis Program Model
- Timing and sizing of public facilities
- Jobs to housing relationship

- d. Monitor and analyze trends with respect to the General Plan database, and recommend policy adjustments where appropriate.
- e. The City will distribute copies of its development monitoring reports to the appropriate school districts, to assist their facilities planning efforts.

## OBJECTIVE A-2 IMPLEMENTATION ACTIONS PROGRAM

Integrate the Land Use and Conservation and Open Space Elements through an Implementation Actions Program (i.e. phased dedication and compensating development opportunities program).

### Implementing Actions:

#### a. Phased Dedication and Compensating Development Program

The policies set forth in the Program are to be considered integral components of both the Conservation and Open Space Element and the Land Use Element of the General Plan. The Program shall integrate the Land Use and Conservation and Open Space Elements together by establishing a program which links the dedication of conservation and open space areas to the development entitlement process. The purpose of the Program is to provide permanent protection of open space by means of public ownership.

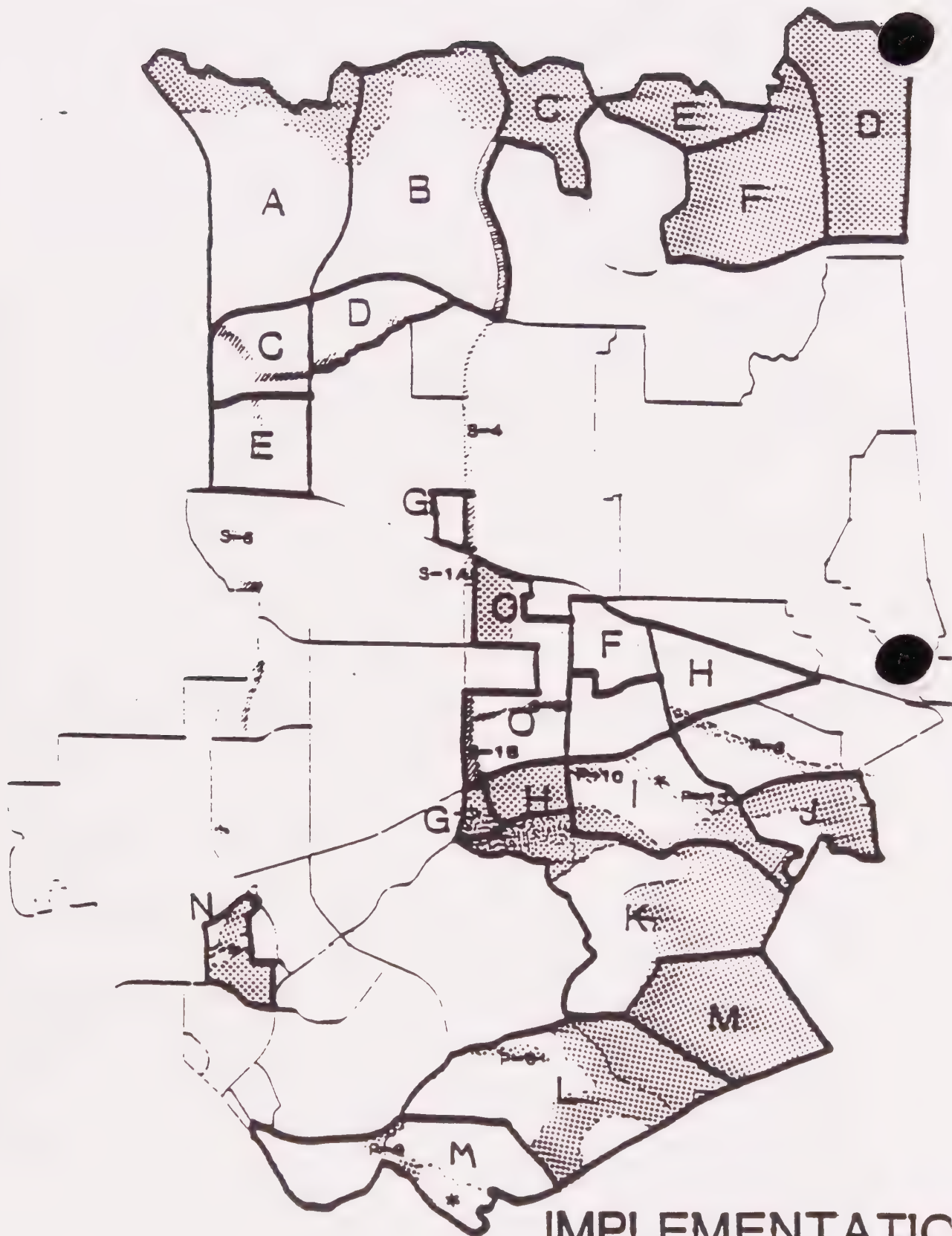
With the completion of the program described below, all major open space preservation areas (under the ownership of The Irvine Company or its successors) that are required to assure the appropriate balance of development and open space will be secured.

Other conservation and open space areas and development areas not under the ownership of The Irvine Company or its successors will, through subsequent planning processes (i.e. General Plan Amendments, Zone changes, Concept Plans, and subdivision applications), be required to assure the appropriate balance of development and conservation and open space areas as outlined in the Land Use and Conservation and Open Space Elements and their respective goals, objectives, and implementing actions.

- b. Dedication/Development Program. The portions of the City directly involved in this dedication development program have been divided into separately lettered "Districts" containing both open space lands for ultimate conveyance to the City and corresponding development areas, as shown on Figure A-19. The open space lands and development areas of a District are, in some cases, not contiguous. The Irvine Company or its successors in interest ("TIC") shall convey the open space lands (consisting of Preservation Areas, minor preservation areas, and Spines as depicted on Figure A-19 by the letter references "P" and "S" respectively, and collectively referred to in this Implementation Actions program as "conveyance areas") within a District to the City or other appropriate public agency as reasonably approved by the City

so that they may be preserved as open space in return for the completion of development on other land in the same District owned by TIC (referred to in this Implementation Actions Program as "development areas"), more particularly as shown on Figures A-19 and A-20, consistent with the following procedures. The city shall undertake such actions as are necessary to secure for TIC the right to develop development areas in the manner set forth herein, and pursuant to a mutually agreeable development schedule. Upon request by TIC, the City shall enter into development agreements, or approve vesting maps, for these purposes.





\* NOTE: Areas with asterisk or number are not a part of implementation district. Please refer to legend and notes on following page.

# IMPLEMENTATION DISTRICT



CITY OF IRVINE GENERAL

# IMPLEMENTATION DISTRICTS LEGEND

## District Boundary

District Boundaries have been drawn to certain development areas and preservation areas, which will be implemented together. Within each lettered district, preservation areas will be conveyed to the city or a public agency after building permits are issued in development areas in accordance with the provisions of the implementation action program.

## Preservation Area

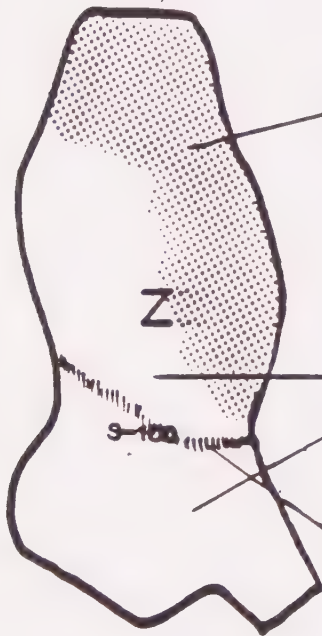
Preservation Areas are lands to be dedicated to the City or other public agency for permanent open space purposes. Numbered preservation area (e.g., "P-10") are not a part of Implementation Districts and will be offered for dedication separate from unnumbered preservation areas.

## Development Area

Development areas are designated for residential, commercial, and/or industrial land uses in the Irvine General Plan and for specific intensities as shown in Figure A-20.

## Spine

Open space spines are not a part of Implementation Districts and will be offered for dedication separate from Preservation Areas in conjunction with the development of adjoining land. Spines have been numbered for general reference.



**Note:** Areas shown with an asterisk are not a part of the Implementation District.

FIGURE A-20

IMPLEMENTATION ACTION PROGRAM

## DEVELOPMENT INTENSITY AND DEDICATION AREA BY DISTRICT

DISTRICT	(4) DWELLING UNITS	(4) COMMERCIAL SF	(4) INDUSTRIAL SF	(4) DEVELOPMENT ACRES	PRESERVATION AREA ACRES (1)(4)
A	4,627	23,769	0	1,532	530
B	3,286	0	0	1,441	487
C	3,900	255,077	0	410	532
D	2,885	150,000	0	551	961
E	4,745	72,680	0	615	350
F	0	0	4,700,000	361	1,266
G	0	500,000	0	68	27
H	0	1,800,000	0	NA	298
(3) I	2,030	300,000	910,000	588	589
(3) J	750	0	0	205	445
(3) K	2,360	0	0	888	837
(3) L	3,460	0	0	907	1,054
(2) M	2,000	600,000	0	588	1,088
N	1,000	0	0	25	192
O	4,050	1,575,000	2,372,931	552	176

1. All acres are estimates of gross acres and are subject to refinement. Acreages will be refined and allocated to specific land use categories in subsequent planning processes. Preservation Areas on this exhibit do not include Spines and Minor Preservation Areas as described in Objective A-2(b).
2. These figures may be adjusted according to the provisions of Objective A-4(d).
3. The distribution of dwelling units among these planning areas may be adjusted according to provisions of Objective A-2(h).
4. Data adjustments will be accounted for in the Development Monitoring Program.



1. All acres are estimates of gross acres and are subject to refinement. Acreages will be refined and allocated to specific land use categories in subsequent planning processes. Preservation Areas on this exhibit do not include Spines and Minor Preservation Areas as described in Objective A-2(b).
  2. These figures may be adjusted according to the provisions of Objective A-4(d).
  3. The distribution of dwelling units among these planning areas may be adjusted according to provisions of Objective A-2(h).
  4. Data adjustments will be accounted for in the Development Monitoring Program.
- c. Map Interpretation. All boundaries on Figure A-19 are conceptually delineated and are not intended to be exact. Gross acreages of conveyance areas and development areas stated in Figure A-20 are estimated and include some lands which ultimately may not be part of the Implementation Actions Program, e.g., roadways, utilities and other public facilities. Preservation Areas are assumed to include any necessary edge treatments, fuel modification areas, and manufactured slopes located at the boundary between development and Preservation Areas ("transition zone"). The precise boundary of the conveyance areas and abutting development areas, and the precise acreage to be offered for conveyance, are to be determined by mutual agreement at subsequent stages of development.
- d. Two-Part Conveyance. As illustrated on Figure A-21, offers of conveyance may be made in two parts. The first part shall contain, to the greatest extent possible, substantially all of the Preservation Area and shall be offered for conveyance at the time specified in Implementing Action e below, but Preservation Area lands abutting potential development areas may be excluded from the first part. The boundaries of the second part shall be defined and offered for conveyance upon the recordation of final maps for development abutting the area to be dedicated. Where appropriate, the transition zone may be offered for conveyance as open space easements.
- e. Preservation Area Conveyance. Concurrent with the recordation of the first final tract map within a development area of each District shown on Figure A-19 (except District H), an offer of conveyance for all the conveyance areas within the District shall be recorded. Each offer will provide that it may be accepted no sooner than ninety days following issuance of building permits for 75% of the development in the District as indicated on Figure A-20 or completion of development in the District, whichever occurs first.

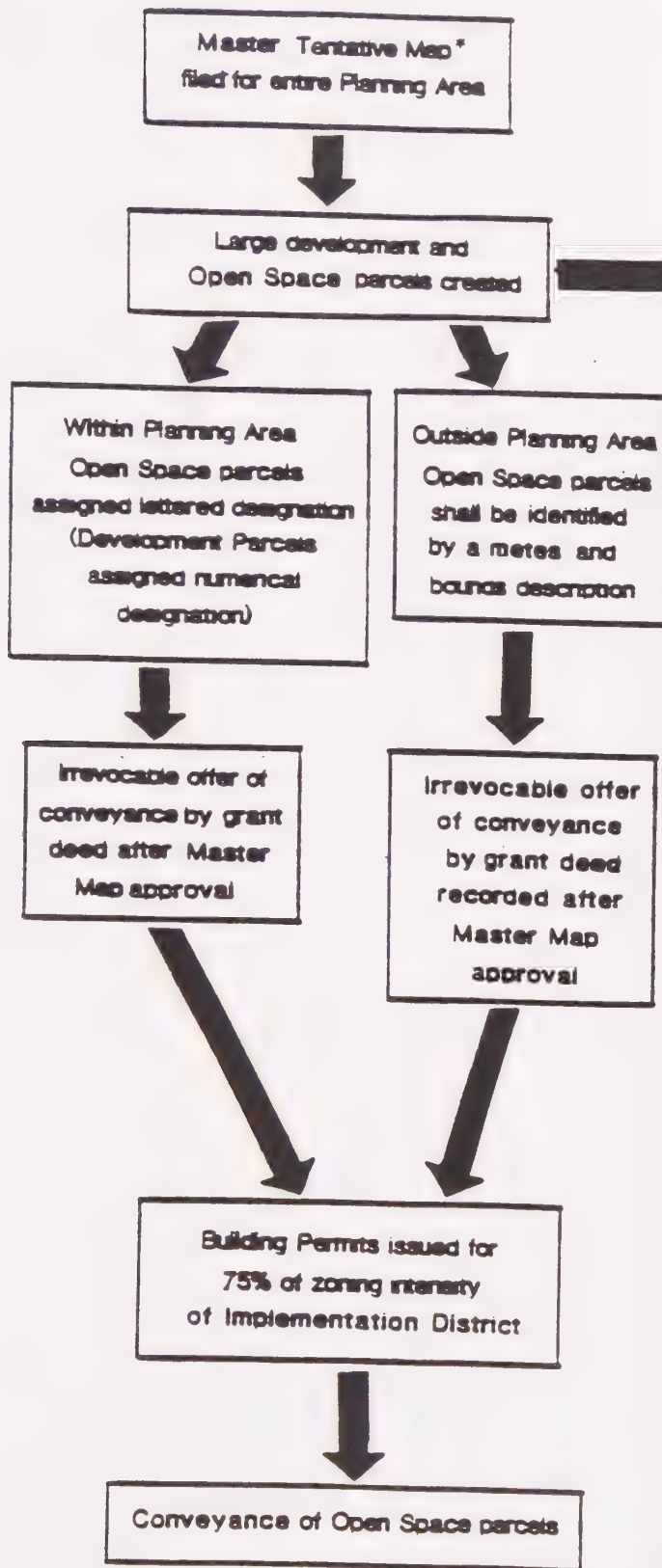


- f. Offer of Conveyance. Each offer will be subject to non-monetary encumbrances, easements, liens, restrictions and title exceptions of record or apparent which do not prevent use of the conveyance areas consistent with the uses set forth in Implementing Action b of Objective A-3, Implementing Action b of Objective A-4 and the definition of Preservation Areas set forth earlier in this element as may be applicable to the conveyance area as identified in Figure A-19, and consistent with the intent of this Program, and to the following:
1. The offer shall provide for conveyance of title by grant deed subject to land use restrictions and/or open space easements assuring that the conveyed land shall be used in perpetuity consistent with the intent of the dedication and the purposes to be served by Open Space Spines and Preservation Areas, with corresponding means of enforcement. Lands reserved for road, transportation, transit, drainage, flood control, water, sewer and utility purposes by public agencies may be excluded from the offer at TIC's discretion.
  2. Mineral rights and water rights (excluding the right of surface entry) will be reserved by TIC on conveyed lands. TIC shall make full written disclosure with respect to toxic or hazardous substances which in its knowledge were stored on or deposited in the land to be dedicated. Road, transportation, transit, flood control, drainage, water, sewer, and utility easements necessary to accomplish development in adjoining areas and/or to accomplish planned facilities by public agencies and utilities will be reserved by TIC on conveyed lands. Easements will be reserved on conveyed lands if necessary to preserve or facilitate agricultural uses on adjoining Preservation Areas not yet conveyed.

# TWO PART SUBDIVISION PROCESS

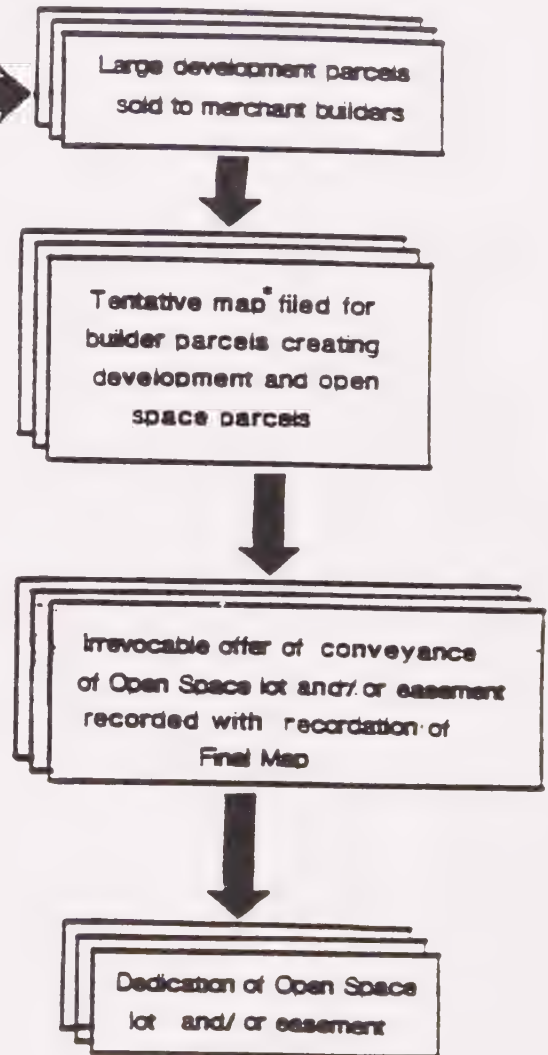
## PART I

### PRESERVATION AREAS CONVEYANCE



## PART II

### TRANSITION ZONE LOT DEDICATION (DEVELOPMENT/PRESERVATION AREA BOUNDARY)



\*NOTE: Vesting map optional

# PHASED DEDICATION PROGRAM



CITY OF IRVINE GENERAL PLAN

3. The enhancement of habitat areas by The Irvine Company, particularly riparian habitat, shall be allowed in conveyed Preservation Areas consistent with applicable standards and procedures for purposes of environmental impact mitigation in development areas.
  4. The City or other appropriate public agency shall accept the offer within two years after all other conditions to acceptance have been satisfied. However, acceptance may be delayed beyond two years by mutual agreement of the City and TIC.
- g. Transferability of Dwelling Units. Subject to paragraph d of Objective A-4, the total number of residential dwelling units in Planning Areas 17, 18, 22, 26 and 27 may not exceed 10,600. These dwelling units may be freely transferred by TIC among the aforementioned planning areas without the need for any amendment to the City's General Plan. Any transfer which increases the number of dwelling units allowed in a Planning Area by more than 15% above the amounts designated in Figure A-10 of the General Plan, or greater percentage may be subject to review as part of the subdivision process. It is the intent of this provision to allow a total of 10,600 dwelling units (except as modified in paragraph d of Objective A-4) to be constructed in these Planning Areas, to be measured cumulatively by actual permits as issued.
- h. Incomplete Development. The development areas shown on Figure A-19 are believed to be free of environmental constraints which would require development in such areas to be limited or which otherwise would render development infeasible. If, however, governmental or developmental standards or requirements constrain development within the development areas of a District due to extraordinary biotic, geologic or other hazard (but excluding MCAS El Toro operations), archaeologic or paleontologic constraints or limitations, the City shall transfer the development opportunities eliminated by such standards or conditions to other mutually acceptable locations.

Additionally, if governmental or developmental standards or requirements constrain development within the development areas of a District due to health or safety constraints attributable to USMCAS El Toro operations the City and The Irvine Company will seek to transfer the portion of the development opportunities reduced by such additional standards, regulations or conditions to other mutually acceptable locations. If another mutually acceptable location cannot be agreed upon, the City and the Irvine Company will meet and confer on appropriate adjustments to the Implementation Action Program.



If the total allowable development in any district is not constructed because the landowner (TIC) and or developer elects not to build to the allowable development intensity, except as provided in Implementing Action d of Objective A-4 the City shall not be required to transfer that balance/difference elsewhere.

- i. Additional Open Space Requirements. No additional open space dedication exactions may be imposed on any land owned by TIC, its successors or assignees, within the City or its Sphere of Influence (excluding unincorporated lands presently designated as agriculture in the Irvine General Plan in Planning Areas 5, 6, 8 and 9, which are not a part of this Program) except as ordinarily required on a project by project basis for compliance with provisions of the City's subdivision ordinance (for example, Quimby Act requirements, village edges and building setbacks).

However, if for reasons other than those governed by Implementing Action h above TIC, its successors or assignees request intensification of the land uses beyond the land use intensities set forth in Figure A-20, the City reserves the right to require additional open space dedication exactions.

- j. Open Space Improvements. No conditions will be attached to any land owned by TIC, its successors or assignees, requiring improvements to or maintenance of Preservation Areas conveyed under this program except for habitat enhancement as provided in Implementing Action f(3) above, for "transition zone" improvements as provided in Implementing Action b above, and for utilities and infrastructure necessary to serve The Irvine Company development.

No conditions will be attached to any land owned by The Irvine Company, its successors or assignees, requiring improvements to or maintenance of the Jeffrey Open Space Spine as defined in paragraph n below, except for utilities and infrastructure necessary to serve Company development and also the permanent trail construction in accordance with the City's 1985 "Guidelines For Bicycle Facilities in Irvine" (excluding grade separations solely used for trail systems) in the spine adjacent to the development. Improvements will be made to the Jeffrey Open Space Spine by the City which are compatible with and complementary to adjoining development. The Jeffrey Open Space Spine will serve as the Village Edge for the adjoining development areas, and no further Village Edge dedications or improvements will be required for adjoining development areas.



### OBJECTIVE A-3 OPEN SPACE SPINE CONVEYANCE

Develop and maintain a network of open space spines that provide a variety -of recreational opportunities, and which link and integrate other conservation and open areas into the land use fabric of the City.

- a. Open Space Spine Conveyance. Conveyance of designated Open Space Spines S-1B, and S-3, and the minor Preservation Areas P-3, P-8, P-9, P-10, and P-13 as shown on Figure A-19 shall be made consistent with Implementing Action f of Objective A-2 in conjunction with the recordation of final tract maps for adjoining development.

Conveyance of Open Space Spine S-1A as shown in Figure A-19 shall be made consistent with Implementing Action f of Objective A-2 in conjunction with the recordation of the final tract map for District O.

The Peters Canyon and Hicks Canyon Open Space Spines as defined by mutual agreement between the Company and City (generally shown as S-5 and S-6 on Figure A-19) shall be conveyed consistent with Implementing Action f of Objective A-2 in conjunction with the recordation of final tract maps for adjoining development.

- b. Jeffrey Road Open Space Spine. The Jeffrey Road Open Space Spine will provide a continuous open space edge of variable width along the eastern side of the ultimate alignment of Jeffrey Road. Except for utilities and general plan roadway improvements, surface uses will be limited to trails and associated passive public recreation and park and ride facilities. It will be composed of the following gross areas generally depicted on Figure A-22.

Additionally, should a park-and-ride facility be located in the Open Space Spine (i.e. southeast corner of Jeffrey Road and I-5), The Irvine Company may convey that portion of the Open Space Spine needed for the facility to Caltrans or other appropriate public agency.

1. PARCEL S-1B

Between I-405 and the Barranca Parkway, the spine shall total 14 gross acres. The width of the spine at the southern end, abutting the Edison ROW-1 shall be greater than the average width of Parcel S-1B.

2. EDISON ROW-2 AND 3

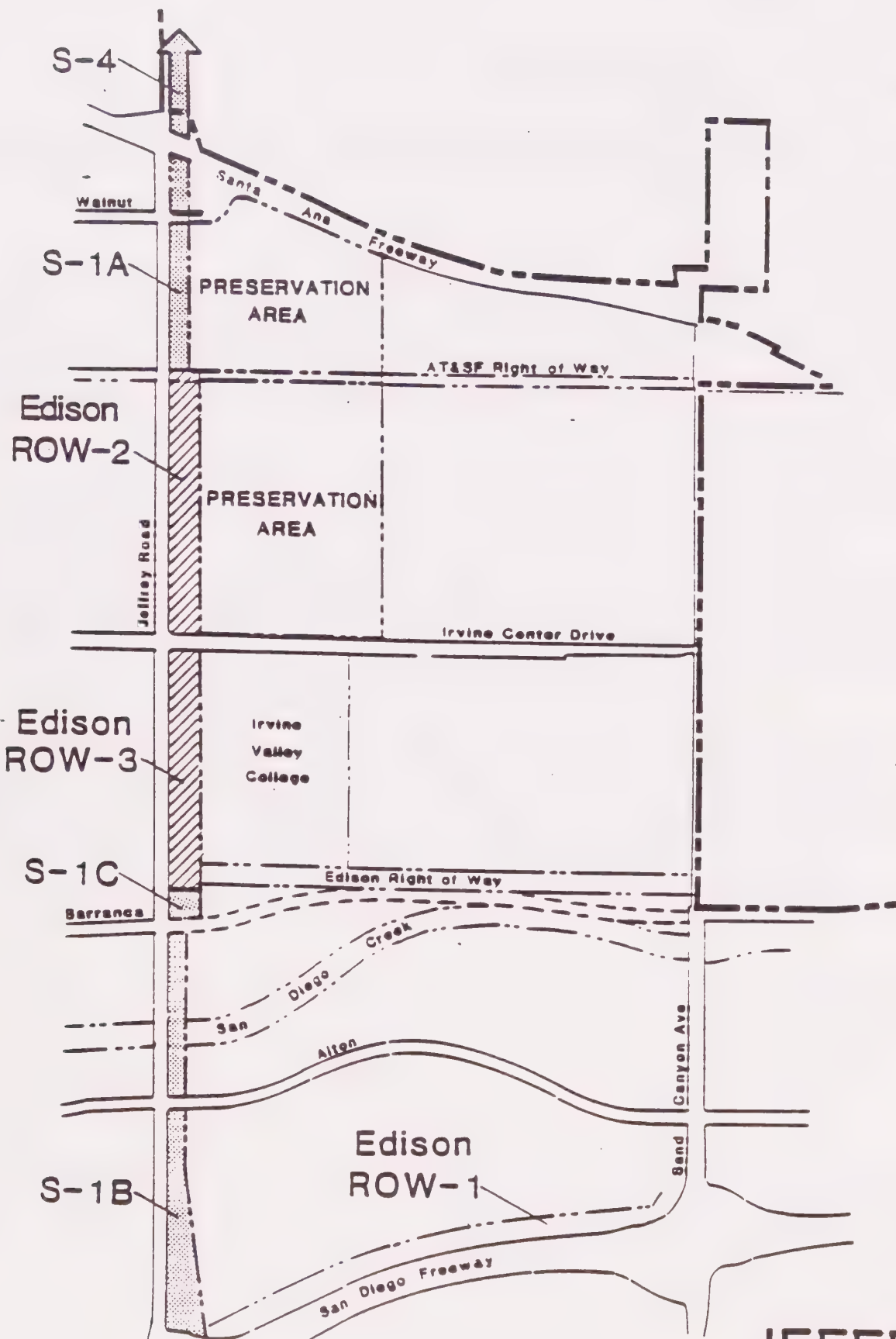
The spine for the portion of Jeffrey Road adjacent to the existing Edison right-of-way shall lie within that right-of-way.

3. PARCELS S-1A AND S-1C

Between I-5 and Barranca Parkway, the spine shall be 16 gross acres. A park and ride facility may be located in the spine. Should a park and ride facility be located in the spine, The Irvine Company may convey that portion of the spine (i.e. southeast corner of Jeffrey Road and I-5) needed for the facility to Caltrans or other appropriate public agency.

4. PARCEL S-4

Between I-5 and the Preservation Area in the Lomas de Santiago Ridge, the spine will average 300 feet in width. The Irvine Company acknowledges the importance of completing the link of the Jeffrey Spine between the I-5 Freeway and the Lomas de Santiago Hills. The Irvine Company agrees to include plans for the spine with future development programs (either in the County or the City) for the land easterly of this spine in Planning Areas 6 and 9 and, pursuant to acceptable dedication agreements with the appropriate jurisdiction, provide offers of dedication for the spine. The City acknowledges and affirms its intention to cooperate in and coordinate planning efforts to arrive at mutual agreement on appropriate land use designations for this area pursuant to the Annexation Policy Agreement between The Irvine Company and the City dated February 8, 1984.



JEFFREY  
OPEN SPACE  
SPINE



#### OBJECTIVE A-4 PLANNING AREAS

Provide direction for the management of the natural and built environment to accommodate the unique situations of various planning areas.

a. Planning Area 3: Limestone Regional Park

In recognition that the Preservation Areas within District D, E and F are also within or adjacent to the County of Orange's proposed Limestone Regional Park, the Preservation Areas within Districts D, E and F shall be conveyed to a public agency acceptable to the City and the County of Orange in order that the land shall eventually be integrated into and become a functional part of Limestone Regional Park, including integrated operations and maintenance which meet the open space objectives of the City.

b. Planning Area 12: Preservation Area

The specified Preservation Area in Planning Area 12 shall be dedicated to the City for public open space purposes in accordance with the Implementation Action Program. Should a park and ride facility be located in the Preservation Area/Open Space Spine (southeast corner of Jeffrey Road and I-5), The Irvine Company may convey that portion of the Preservation Area/Open Space Spine needed for the facility to Caltrans or other appropriate public agency.

Prior to conveyance, agriculture may continue on this site at the discretion of the landowner. An agricultural preserve contract will be made available if requested by the landowner.

Golf course is a permitted use in the preservation area in Planning Area 12 subject to the City's approval of such use and provided the landowner conveys an open space easement, limiting its use to golf course and customary and appurtenant facilities, to the City. Conveyance of such an easement satisfies any dedication requirement of the Implementation Action Program.

Should the City elect to apply a golf course designation to this area subsequent to the receipt of such land in accordance with the Implementation Action Program, the prior landowner will be offered an exclusive right at no cost for such right, to operate the golf course as a for profit facility open to the public.



c. Planning Areas 25 and 26: Coyote Canyon Landfill

1. The Coyote Canyon Landfill shall be maintained in an environmentally sound manner during the interim period (interim period refers to the period between closure and development of an after use).
2. The City, the County of Orange, and the property owner shall enter into a cooperative study to determine what effective uses could be developed and maintained during the interim period for the Coyote Canyon Landfill. The results of the study should be incorporated into the closure plan for the landfill. A commitment to this study shall be required at time of conditional use permit review.

d. Planning Area 26: Special Policies

Within the mixed use and/or district commercial area, in addition to the 10,600 dwelling units reserved in Implementing Action h of Objective A-2, up to 800 dwelling units will be allowed in lieu of commercial development. For each dwelling unit provided, the total allowable commercial development will be reduced by an amount equivalent to the traffic generated by the dwelling unit (in average daily vehicle trips).

Office uses will be allowed in the district commercial area, provided that district commercial uses are located in the mixed use area.

As part of subsequent planning and environmental processes, a historical report will evaluate the potential historical significance of the Buffalo Ranch.

e. Planning Area 33:

1. District H Conveyance. Concurrent with the issuance of the first building permit for development exceeding the equivalent of 6,200 points as computed under the Irvine Center Development Agreement executed in August 1983, an offer of conveyance for all of the conveyance areas within District H shall be recorded. The offer will provide that it may be accepted no sooner than ninety days following issuance of building permit for 1,350,000 (i.e., 75% of 1,800,000) square feet of gross floor area of additional development over and above the equivalent of the 6,200 points. The establishment of this measurable point in the development of the development areas of District H when the conveyance of the open space lands may be accepted shall in no way be interpreted to modify the rights of the

landowner under the Irvine Center Development Agreement executed in August 1983 (including development above the maximum point total referenced in that Agreement that may be authorized by Note 3 of Exhibit C1 to that Agreement).

2. Circulation Conditions to Allow an Incremental Increase of Development in Planning Area 33. The "Incremental Increase" as defined below of one million eight hundred thousand (1,800,000) square feet (Gross Floor Area) (1) of development shall be permitted in Planning Area 33 (Irvine Center) (2) contingent upon the following:

- i. Adoption of an extension of the facility currently known as State Route 133 (The Laguna Freeway) northerly of the I-5 freeway in the City of Irvine's Circulation Element of the General Plan.
- ii. Creation and adoption of a traffic management program with the following components:

Consolidation of traffic management programs under a single management body for the non-residential/non-retail development in Planning Areas 12, 13, 17, 32 (Irvine Technology Center), 33 (Irvine Center), and 34 (Irvine Research Center). Development in Planning Area 35 (Irvine Industrial Center, East) is not required to participate in this transportation management program, although it is intended that the management body actively pursue participation of employment sites in Planning Area 35.

The goal for the consolidated traffic management program shall be to reduce by 20% vehicle trips generated by the above referenced development during the p.m. peak hour. (2)

There shall be a program to monitor and report on the achievement of the vehicle trip reduction goals through use of the annual report published by the management body.

The Incremental Increase (1) shall include General Commercial development above the development authorized under the Irvine Center Development Agreement executed in August 1983 (including development, above the maximum point total referenced in that Agreement, that may be authorized by Note 3 of Exhibit C1 to that Agreement). Of the Incremental Increase, 600,000 square feet (GFA) (3) may be for retail uses. With the exception of the foregoing limitation, the exact mix of uses and their physical distribution within the Planning Area shall be



directed by the principles embodied in the Irvine Center Development Agreement.

Concurrent with subsequent zoning ordinance changes that are necessary to implement this paragraph e, the zoning for Planning Area 33 (Irvine Center) shall be changed to include the Incremental Increase. The contingency requiring creation and adoption of a transportation management program shall be met when the single management body has been formed, established, and is in operation. The 20% reduction referred to in section (2)ii above is only a goal for the transportation management program, and its achievement is not a contingency to development of the Incremental Increase.

The traffic reduction goal set forth in section (2)ii above does not supersede existing requirements included in the existing zoning for the Irvine Medical Science Complex (Planning Area 13) or The Irvine Technology Center (Planning Area 32).

The Irvine Spectrum Transportation Management Association, Spectrumotion, may serve as the management body which is eligible to fulfill the requirement cited above in Section 2.ii.

The Irvine Company shall not be exempted from submitting additional traffic analyses to determine if modifications will be necessary to approved traffic lane configurations for roadways within Planning Area 33. Part of this assessment can include whether additional right-of-way reservation will be necessary to accommodate the revised intensity standard for Planning Area 33.

f. Planning Area 36: Irvine Business Complex

1. Regulate the intensity of traffic generating uses through the Zoning Ordinance.
2. Establish zoning provisions which establish parcel-specific intensity standards regulated by the maximum allowable trip generation based on the existing and previous approvals granted by the City of Irvine and ensure development potential of 0.25 FAR office trip equivalency for vacant parcels and parcels developed

at less than a 0.25 FAR of office equivalent development.

3. Establish a full funding program or a development phasing plan for the IBC to ensure that land development occurs commensurate with infrastructure development.
4. Consider IBC a residential village for the purposes of implementing the Housing Element and apply all housing element policies to residential development in IBC.

g. Planning Area 38

1. Restrict residential development to a density range that is neither higher nor lower than the density shown for that area on the land use plan, unless specifically authorized by the City Council at the time of zoning approval. Although the City Council may permit higher densities within an area, the overall density cannot exceed the maximum shown on the general plan for that area. For example, if, at the time of zoning, the City Council permits some sites in the 5-10 dwelling units per acre to exceed 10 dwelling units per acre, the overall density for the area cannot exceed 10 dwelling units per acre.
2. Consider the location of the primary helicopter approach and departure corridors in the vicinity of Planning Area 38 at the time of zoning and subdivision map approval. The land use pattern shall be designed to locate the non-residential uses in those areas to the maximum extent possible. In all cases, schools shall not be located under those flight paths. The location of the 65 CNEL noise contour of MCAS Tustin shall be considered in the subsequent planning of residential uses which may be impacted.
3. Require the applicant to show, at the concept plan level, the various uses and their magnitude and locations within the multi-use area. The corridor shall contain a mix of uses. The permitted uses within the Planning Area 38 corridors are high density residential, commercial, institutional, parks, utilities, and related uses.
4. Because the public and private facilities serving Planning Area 38 are in the Activity Corridor, coordinate planning in Planning Area 38 to ensure



provisions are made for appropriate vehicular, pedestrian, and bicycle linkages between the residential areas of Planning Area 38 and the Activity Corridor.

5. Peter's Canyon Wash Open Space Spine shall continue through Planning Area 38. The exact alignment and dimension of the spine shall be determined at the concept plan level of review. However, in no event shall the corridor be less than 75' in width.

h. Planning Area 51:

1. Require that zoning for the Clear Zone portion of Planning Area 51 be in compliance with the restrictions set forth in the Air Installation Compatible Use Zones (AICUZ) Study.
2. Require site planning for development of Clear Zone portions of Planning Area 51 be limited to open space or other uses which are compatible with a Clear Zone designation according to the most current available Air Installation Compatible Use Zones (AICUZ) Study.

Footnotes -

Planning Area 33

- (1) The additional allowed increment of 1,800,000 square feet (GFA) is equivalent to 1,565,000 Gross Leasable square feet.
- (2) The 20% reduction is intended to be measured as a reduction of 20% of the p.m. peak hour vehicle traffic that is generated by all development within the subject Planning Areas excluding residential development, hotels and sites that include 50% or greater of retail development. The benchmark for the traffic reduction goal shall be based upon the generation rates listed on Table 1.
- (3) The additional allowed increment of 600,000 square feet (GFA) is equivalent to 522,000 Gross Leasable square feet.

Table 1  
Trip Generation

<u>ITAP</u>	<u>Land Use</u> <u>Designation</u>	<u>Units of</u> <u>Measurement</u>	<u>PM Peak Hour Rate</u>			
			<u>4:30</u> <u>In</u>	<u>5:50</u> <u>Out</u>	<u>4:45</u> <u>In</u>	<u>5:45</u> <u>Out</u>
48	General Office	TSF	.36	1.13	.34	1.06
52	Medical Office	TSF	1.10	2.50	1.03	2.35
54	Manufacturing	TSF	.04	.32	.03	.29
55	Warehouse	TSF	.05	.41	.04	.36
56	Research/Development	TSF	.22	.90	.21	.85
81	Govt./Civic Center	TSF	1.10	2.50	1.03	2.35
84	Hospital	BED	-	-	.40	.90

## OBJECTIVE A-5 FISCAL PROGRAM

Insure that City revenues will be able to meet expenditures to provide a high level of services without a burdensome level of taxation.

### Implementing Actions:

- a. Ensure that existing Citywide service levels are not compromised over time by quantifying existing levels of service, extending the same levels of service to newly-developed areas, and by requiring planning areas with particular health, safety, welfare, and environmental constraints to provide an independent means to mitigate their particular service provision constraints.
- b. Develop, adopt and monitor land use statistical tables and diagram which are correlated to the land use plan which quantifies the City's ultimate development and population potential, and provides for a minimum of 15% excess of revenue above costs for the years beyond the City's five-year budget forecast, and does not result in the City forecasting revenues to exceed the Gann limit.
- c. The City shall reconcile the desire for public facilities and infrastructure development, maintenance, and rehabilitation, with the City's long-term funding potential by formulating capital improvement evaluation criteria and a comprehensive capital facilities funding plan at the conclusion of the adoption of the Conservation and Open Space Element (82-GA-0016) as part of the comprehensive update of the General Plan.
- d. Use the land use intensities from the statistical tables and diagram Figures A-1 and A-5 through A-18 for sizing basic utility systems.
- e. Through the use of a General Plan-based fiscal impact evaluation model, monitor development and changes to the City's adopted land use plan, and modify development patterns and phasing as necessary to ensure that land use decisions do not conflict with the implementing action identified in Objective A-5 (a).
- f. Phase residential development in a way that minimizes the rapid extension of public facilities and services over large areas before full development (residential phasing plan, Figure A-3).
- g. Ensure the availability of adequate public facilities for any new development proposals.

- h. Encourage the preservation and maintenance of open space by individuals or community associations rather than the City through maintenance districts or other policies. Solicit private development of public use golf courses.
- i. Use native trees, shrubs, and grasses with low maintenance costs.
- j. Establish a large industrial area providing tax revenues in excess of cost of required services.
- k. Establish industrial uses as economically viable, attractive, and well related to other uses. Provide opportunities for a wide variety of sizes of industries from small enterprises to large corporations.
- l. Establish commercial uses as economically viable, attractive, interesting, and well related to other land uses.
- m. Develop industrial and commercial uses to provide municipal revenues for capital investment and rehabilitation of facilities serving residential development.
- n. Encourage residential development in a manner that reduces expenditures for public services, systems, etc. by developing higher densities with public open space areas.
- o. Establish a balance of land uses that ensures that the City will be able to provide necessary municipal services.
- p. Establish a City program to continually evaluate the relationship between projected City revenues and expenditures related to land use changes.



## OBJECTIVE A-6 LAND USE COMPATIBILITY

Achieve compatible uses on lands within and adjacent to the planning area. -

### Implementing Actions:

- a. Work with University of California, Irvine to develop only those uses within the University environs which are compatible with normal research, teaching, or operational functions of the campus.
- b. Encourage mutually beneficial relations between the University of California, Irvine and industry.
- c. Impose appropriate constraints on the following uses to ensure their compatibility:
  - Airports
  - Surface utilities
  - Non-residential commercial (motels, hotels, etc.)
  - Junk yards
  - Major "cut and fill" projects
  - Sand, gravel, or other borrow operations
- d. Consider the following land use activities incompatible with Irvine:
  - Strip commercial
  - Billboards
  - Polluting industries
- e. Permit the expansion of land uses shown on the land use plan, which are predicated upon the assumed location of CNEL contour lines shown on Figure F-1 and F-2 of the noise element, only after empirical studies of actual noise impact and based upon the land use compatibility criteria shown on Figure F-4 of the noise element.
- f. Insure that industrial uses do not have undesirable external effects on other land uses or the environment.
- g. Encourage industries meeting locally developed, county, and state pollution control standards. Prohibit industries not meeting these standards.
- h. Approve users of large quantities of water only if water and sewer agencies approve.

- i. Require applicants submitting tentative maps to provide written evidence to the City that adequate water service is available.
- j. Work with Irvine Ranch Water District to ensure the nature, location and timing of new development is compatible with the District's Water Master Plan.
- k. Approve noise, odor, dust, water polluting, or producing activities only with mitigating measures.
- l. Group industrial uses in large centers rather than dispersing them through the community.

## OBJECTIVE A-7 COMMERCIAL

Relate commercial centers of appropriate sizes to the hierarchy of development areas from the village scale on up and encourage commercial centers as interesting centers of activity.

### Implementing Actions:

- a. Designate a village center for each village.
- b. Encourage village center uses as those necessary to daily life of area residents, for example: grocery stores, liquor stores, barber shops, drug stores, beauty salons, small restaurants, hardware stores, and bicycle shops.
- c. Provide district commercial centers to serve more than one village to provide more comparison shopping, not to be identifiable with a particular village.
- d. Encourage a mix of day and night uses in commercial centers.
- e. Permit shared use of parking for off-hour activities (churches, movie theatres, etc.).
- f. Limit commercial uses in commercial centers to types and sizes compatible with their trade areas.
- g. Village centers should be readily accessible to bicycle and pedestrian trails to encourage alternative modes of transportation.
- h. Village centers shall use profuse landscaping and architectural and sign controls.
- i. District centers shall include landscaped courts, bicycle trails, landscaping, and architectural controls.
- j. Encourage retail uses within the Industrial land use designations, provided that retail uses are intended to serve the industrial employment centers.
- k. Encourage retail uses within each residential planning area through the Village Commercial land use designation.
- l. Design roadways which ensure safe and efficient traffic flow while also encouraging adequate and convenient access to retail sites.

## OBJECTIVE A-8 HILLSIDE DEVELOPMENT

Provide guidelines for the development of those areas of the City which, due to their topography, require special consideration to assure that they are developed in a way that will substantially maintain their natural character and environmental and aesthetic values.

### Implementing Actions:

- a. Continue to coordinate general plan level hazard and resource information (i.e. Safety, Seismic, and Conservation and Open Space Elements) to determine the level of development within hillside areas.
- b. Utilize Objective L-4 in the development review process to determine the appropriate extent of hillside resource implementing actions to be applied to hillside areas in the City's incorporated territory and its adopted sphere of influence.
- c. Ensure that development within the hillside areas complies with the General Plan Development standards regarding the location and intensity of residential development.
- d. The following actions only apply to areas within the "Hillside District" established by the Hillside Development "HD" Overlay District Ordinance of the City's Zoning Ordinance.

### Definitions

1. **Natural Slope:** the physical characteristic of a given area of undisturbed land which will be determined by the formula in I.B below.

2. **Average Existing Slope:** 
$$S = \frac{100 \times I \times L}{A}$$

S = Average existing slope

I = Contour intervals in feet

L = Sum of length of contours in feet excluding drainage courses, rock outcroppings and all permanent open space within the project area.

A = Total square feet in a project area excluding drainage courses, rock outcroppings and all permanent open space within the project area.



3. **Project Area:** a geographic area to be defined in a concept plan or master tentative map with boundaries generally related to existing landforms, such as plateaus, bowls, draws, etc. and within one general plan land use category.
4. **Development Area:** the total of all project areas within a planning area defined in the General Plan and excluding Preservation Areas.
5. **Mass Grading:** the movement for redistribution of large quantities of earth over large areas. Disruption of the majority of the on-site surface terrain is common. Modifications or elimination of minor natural landforms may result.
6. **Major Ridgelines:** those ridgelines which are illustrated on Figure A-23.
7. **Local and Collector Roadways:** the equivalent of local and collector roads defined in the Irvine General Plan.

#### Slope Analysis Procedures

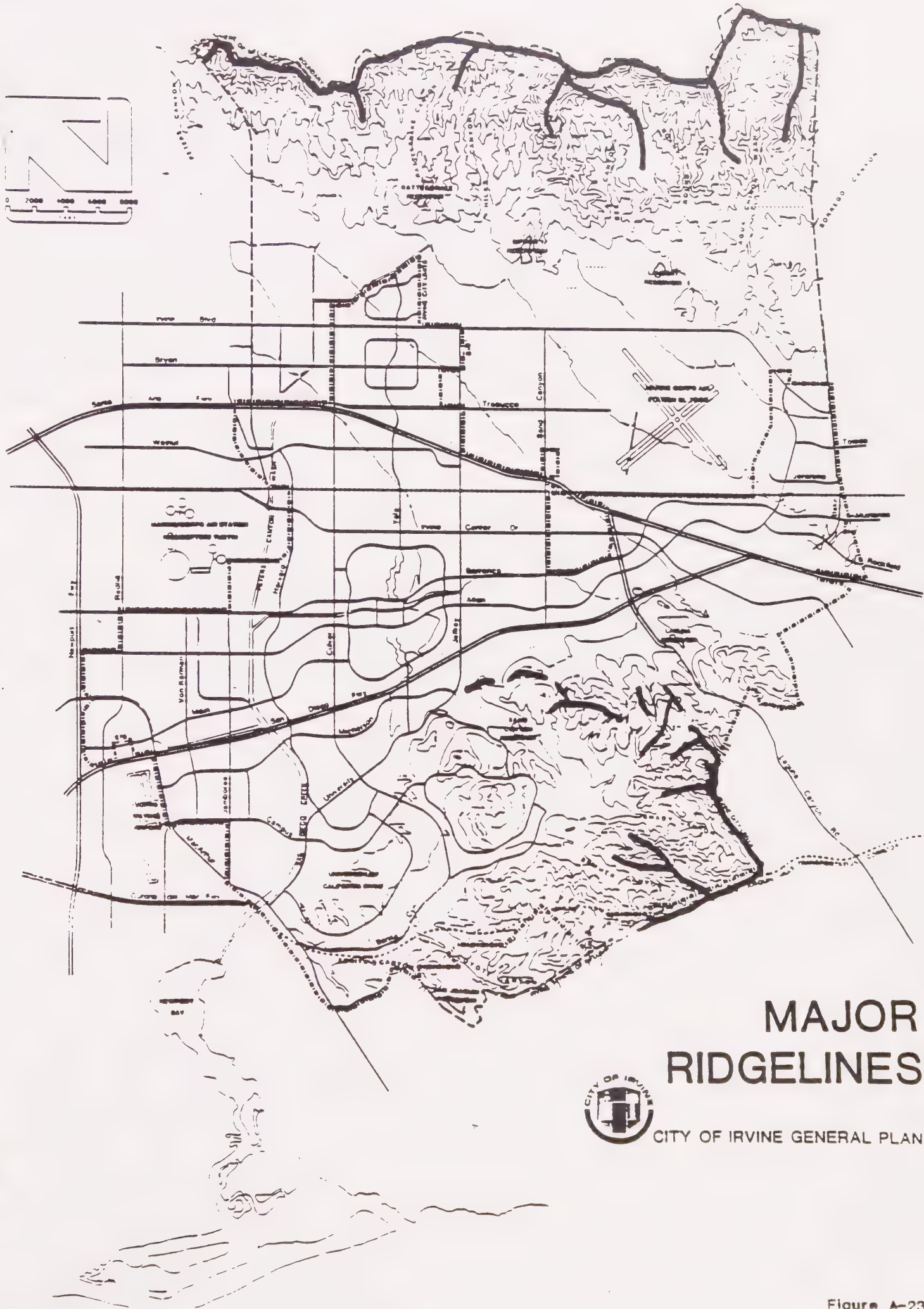
1. In the hillside district, the following sequence of tasks will be completed in conjunction with a concept plan or master tentative map:

Delineate project areas on a contour map.

Delineate drainage courses, rock outcroppings and all permanent open spaces within project areas on a contour map.

Calculate the **average existing slope** for each project area in accordance with C.2. above.

Assign a **slope zone** to each project based on the average existing slope.



# MAJOR RIDGELINES



CITY OF IRVINE GENERAL PLAN

## Location and Character of Development

1. Development is permitted in all slope zones. The following shall serve as general guidelines for four established slope zones to ensure that development will complement the overall character of the landform. In order to permit the extension of a logical design concept, the guidelines for one zone may be applied to limited portions of an adjacent zone.

### Slope Average

#### Zone Existing Slope

#### General Guidelines

1. Less than 10% This is not a hillside condition. No special site planning, grading, architectural, and/ or landscaping techniques are required.
  2. 10%-19.9% Mass grading will occur and existing landforms will be modified. Grading will reflect the overall character of the hills. Level building sites will be permitted.
  3. 20%-29.9% Mass grading will occur and existing landforms will be modified. Level and split level building sites will be permitted. Special site planning, grading, and/or landscaping techniques will be required to ensure that the development reflect the overall character of the hills.
  4. 30% and greater Grading will occur and existing landforms will be modified. Split level building sites will be permitted. Special site planning, grading, architecture, and/or landscaping techniques will be required to ensure that the development reflects the overall character of the hills.
2. Major ridgelines are identified on Figure A-23 and will be preserved as open space. The top of structures will be positioned below the top elevation of any adjoining major ridgeline. Ridgelines not identified as "major" may be developed as consistent with other applicable hillside development guidelines contained herein.
  3. Development shall be permitted in identified seismic or geologic hazard areas (General Plan seismic response areas 4 and 5), natural springs, perched water tables, faults, fracture zones and where bedding planes project out of the slope subject to the City's review and



acceptance of a detailed geologic or soils engineer's report which identifies mitigation measures required for safe development of the site.

4. Development shall be located to preserve and protect significant historical, archaeological and paleontological sites in accordance with the policies of the General Plan. The significance of historical, archaeological, and paleontological sites shall be determined through the environmental assessment process.
5. Upon annexation of the Northern and Southern Spheres of Influence, the Hillside Overlay District zoning shall apply to those areas with slopes in excess of 10 percent.

#### Grading

1. Re-vegetation of cut and fill slopes shall be required according to the guidelines in the Landscaping section herein (Landscaping).
2. Within "transition zones" as defined in the conservation and open space element, the following shall apply:
  - The overall slope, height and grade of any cut and fill slope shall be in character and scale with the natural terrain in the Preservation Area to be dedicated.
  - Where feasible, the toes and tops of all slopes in excess of 10 feet in vertical height and visible from public areas shall be rounded with curves in proportion to the total height of the slope.
  - Any dwelling unit shall be located a minimum of 10 feet from the toes and tops of all slopes which are over 10 feet in vertical height and which abut dedicated Preservation Areas.
3. Manufactured slopes shall be contour graded or screened by landscaping in accordance with the following techniques:
  - The angle of graded slopes which are visible shall be gradually adjusted to the angle of adjoining natural terrain.
  - Graded slopes shall be vegetated and shall reflect the form of existing contours.
  - The toes and tops of visible graded slopes in excess of 10 feet in vertical height shall be screened by landscaping or rounded in proportion to the height of the slope where drainage and geotechnical stability permit such rounding.



- The horizontal contours of graded slopes shall be screened by landscaping or curved in a continuous, undulating fashion.
4. Except for road and utility construction in accordance with approved plans and agricultural uses, grading will be prohibited until a tentative tract or parcel map has been approved for the area. Grading for borrow or disposal of earth outside of tract boundary may be approved by the Planning Commission provided plans conform to an approved Planning Area level conceptual grading plan and residents in the area have been advised in advance.
  5. Grading plans will include mitigation measures that reduce to acceptable safety levels underground water seepage which may occur because of increased irrigation or landform alteration.
  6. Conceptual grading plans shall be submitted in accordance with the provisions of Section V.E-248 of the existing Hillside Development Overlay District.

## Landscaping

1. Where feasible, all landscaped common areas shall use recycled water when permanent irrigation is required and the supply of recycled water supply is adequate.
2. All cut and fill slopes shall be vegetated. Landscape and irrigation plans shall be submitted for approval in accordance with the provisions of the Hillside Development Overlay District.

## Drainage

1. Interceptor ditches shall be established only where necessary above cut/fill slopes and the intercepted water conveyed to a stable channel or natural drainageway with adequate capacity.
2. Road designs shall be such that water on roadways is prevented from flowing off the roadway in an uncontrolled fashion.
3. Natural drainageways shall be riprapped or otherwise stabilized below drainage and culvert discharge points for a distance sufficient to minimize channel erosion.
4. Runoff from areas of concentrated impervious cover (e.g., roofs, driveways, roads) shall be conveyed to a natural drainageway or drainage structure with sufficient capacity to accept the discharge without undue erosion. The effects of new drainage patterns on existing systems shall be accounted for in the design of the project drainage plan.
5. Sediment catchment basins and other erosion/siltation control devices shall be constructed and maintained in accordance with an overall erosion control plan approved by the City.
6. The overall drainage system shall be completed and made operational at the earliest practical time during construction.

## Views

1. Homes will be oriented to allow view opportunities, although such views may be limited. Residential privacy should not be unreasonably sacrificed.

2. Any significant public vista areas and view corridors to Preservation Areas from arterial highways to be protected will be identified at the time of zone change in accordance with the provisions of Section V.E-248 of the existing Hillside Development Overlay District. Public vista areas and view corridors within project areas are not required to be protected.

#### Roadways

1. Variations in the City's established roadway standards shall be carefully considered for reduction in slope zones 2, 3, and 4 where safety and circulation considerations justify.
2. Sidewalks should only be required in slope zones 2, 3, and 4 only when other means of safe and convenient pedestrian circulation are not available and then only in accordance with a carefully conceived total pedestrian circulation plan.
3. Grading for local and collector roadways shall comply with Section 3 of "Grading" herein.
4. Those portions of Bake Parkway and Sand Canyon Avenue which are located within or abut Preservation Areas shall be contour graded and vegetated in accordance with the following techniques where feasible:
  - ° The angle of graded slopes shall be gradually adjusted to the angle of adjoining natural terrain.
  - ° Graded slopes shall be vegetated with plants similar to or complementary with the adjoining natural plants.
  - ° Graded slopes shall reflect the form of existing contours. Horizontal contours shall be curved in a continuous, undulating fashion.
  - ° The toes and tops of graded slopes in excess of 10 feet in vertical height shall be rounded in proportion to the height of the slope where permitted by drainage and geotechnical stability.

#### Fire Protection

1. Hillside development within "high" or "extreme" fire hazard zones, as determined through the environmental review process, shall be designed to reduce fire hazards in accordance with the requirements of the Orange County Fire Marshall.

## Open Space/Development Boundary

1. Access to special, endangered, rare or fragile plant and animal habitats shall be limited, with public access carefully managed to prevent disruption of the area's natural values.
2. Public access to public resources shall be provided, where appropriate, in accordance with the requirements of the Subdivision Ordinance (sec. V.F-504). Conflicts between public access to public resources and the need for security and privacy of residents will be minimized.
3. At the boundary between development and Preservation areas ("transition zones") provisions will be made for fuel modification zones in accordance with the Fire Protection Guidelines. Maintenance of these fuel modification zones shall be the responsibility of the respective maintenance district, community association or other appropriate agency. Areas in fuel modification zones subject to public access or use should be the responsibility of an appropriate public agency.



## OBJECTIVE A-9 JOBS-HOUSING RELATIONSHIPS

Develop a program to coordinate residential and non-residential development on a five year basis.<sup>1</sup>

### Implementing actions:

- a. Establish and implement residential and non-residential development objectives [eg. jobs/housing balance] every five years concurrent with revisions to the Housing Element.
- b. Monitor and phase future development to maintain a desired jobs-to-housing balance.
  1. Utilize studies/survey data from Objective A-1 and provide an annual monitoring report regarding the attainment of these objectives and criteria.
  2. Through the development monitoring program follow employment trends within the central/ south Orange County area. This program should include close coordination with SCAG, AQMD, the County of Orange, neighboring communities and the development community.
  3. Monitor actual development for comparison to General Plan estimates regarding population and employment figures, and revise estimates through Objective A-1.
  4. Ensure that monitoring includes studies/surveys of Irvine's built environment to validate General Plan estimates. The studies/surveys should quantify actual employment generation rates, land use and demographic characteristics, wage-earners per household, commuting patterns and other factors that influence a jobs-to-housing balance.
  5. Ensure monitoring addresses the SCAG/AQMD jobs-to-housing plan for compatibility with the subregion and city goals.

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<sup>1</sup>As a point of reference, the analytically derived jobs-to-housing ratio as described in the EIR Case No. 82-GA-0016 is 1 dwelling unit per 3.66 jobs.

- c. Participate in the SCAG/AQMD regional growth management plan and attempt to achieve consistency with regional and subregional goals and policies for a jobs-to-housing balance.
- d. Participate with the County of Orange in cooperative efforts to coordinate strategies to meet housing, employment and jobs-to-housing balance objectives.
- e. In implementing the residential and non-residential development objectives through the exercise of the City's zoning power address, at a minimum, the following:
  - 1. Coordinate Objective A-5 and corresponding implementing actions to maintain fiscally sound land use phasing.
  - 2. Coordinate Circulation Element and corresponding implementing actions to maintain adequate circulation capacity and infrastructure.
  - 3. Ensure that sufficient land is zoned for residential opportunities to achieve the City's quantified objectives: to realize a diversity of housing types and affordability requirements; to meet the development objectives of the Housing Element; and to be compatible with non-residential objectives.
- f. In planning areas without zoning and/or concept plan approval, ensure that at the time of such approvals, to the greatest extent feasible, General Plan housing objectives are fully realized for that planning area.
  - 1. At the time of zoning and/or concept plan approval, if the General Plan housing opportunities are not achievable due to physical and environmental constraints and/or other planning considerations, initiate a transfer of the remaining dwelling units to another Planning Area. The transfer will not involve a General Plan amendment provided:
    - i. Not more than ten percent of any Planning Area's units are transferred to another Planning Area without zoning and/or concept plan approval.
    - ii. The transferred units are built at either the medium, medium high or high density residential categories in the receiving Planning Area.
  - 2. At the subdivision stage [i.e., Master Map], if the housing opportunities approved in the zoning and/or concept plan are not realized due to physical and environmental constraints and/or other planning considerations, allow for

a transfer of the remaining dwelling units to a different Planning Area. The transfer will utilize and be consistent with the process and criteria outlined in the section above.

3. The transfer of dwelling units will be coordinated and implemented through Objective A-1 [Development Monitoring Program].
- g. Any General Plan Amendment which would increase employment opportunities shall address the City's jobs-to-housing balance.
- h. Ensure through the IBC/Urban Village [PA 36] rezoning effort that the City's desired jobs-to-housing balance is maintained. Encourage through the IBC rezoning effort that adequate land area is zoned for residential uses. If increases in employment opportunities occur, that corresponding increases in housing opportunities occur within the IBC/Urban Village [PA 36].

### Related Objective Numbers

Urban Design Element - B-1  
Housing Element - C-3, C-5  
Circulation Element - D-1, D-2, D-3, D-4, D-5, D-6, D-7  
Scenic Highways Element - E-2  
Noise Element - F-1  
Public Facilities Element - G-1  
Waste Management Element - H-1, H-2  
Safety Element - J-1, J-2  
Parks and Recreation Element - K-1, K-2, K-3, K-4  
Conservation and Open Space Element - L-1, L-2, L-3, L-4  
Seismic Element - M-1, M-2  
Cultural Resources Element - N-1, N-2

### Compliance Regulations

City of Irvine Zoning Ordinance  
California Subdivision Map Act  
City of Irvine Subdivision Ordinance  
California Environmental Quality Act (CEQA) and Implementing  
Procedures  
City of Irvine Capital Improvement Program  
Uniform Building Code as Supplemented by the City of Irvine









## URBAN DESIGN ELEMENT

This element describes an urban design structure which will provide the City with character and form as it develops. The Urban Design Element is an optional element which if included in local general plans must be implemented (California Government Code 65303).

### Description of Urban Design

The design of a City can be consciously ordered to improve how well things look and how well they serve their purpose. Urban design focuses on the overall design of the planning area, as opposed to the planning and design of individual sites. To accomplish this, the various land uses of the City have been organized and unified by an "urban design structure." The open space system, the circulation network, and the planning area and district structure comprise the overall urban design structure. The urban design structure provides a framework in which a unified City is created, with an image of overall identity for its residents. It guides the growth of the planning area, while preserving the natural environment and maintaining individual project and future planning flexibility.

Urban design complements the Land Use Element of this General Plan. While the Land Use Element describes the nature and intensity of uses in a specified area, urban design describes the interrelationships of those uses within the urban design structure. The Urban Design Element is also strongly related to the Circulation, and Conservation and Open Space Elements.

### Existing Conditions

The Land Use Diagram is divided into statistical areas, called planning areas, as depicted in Figure A-2. Planning areas form the measurement unit for allocating and monitoring building intensity and population intensity by Land Use Element category (i.e. Land Use Element statistical tables Figures A-5 through A-10). Additionally, other land use information (e.g. zoning) is also assigned to planning areas to provide a constant statistical unit for planning and monitoring purposes. A residential planning area can be designed to house a similar or deliberately diversified mix of life styles and contains a variable mix of public facilities depending on its size. A residential planning area has a population ranging from 2,000-10,000 people for hillside areas and 5,000-30,000 people for flatland areas. Neighborhoods are subunits of planning areas, and in Irvine, are generally synonymous with tract increments. The central activity corridor serves to link the flatland planning areas with the planning areas at the east and west ends of the City. This activity corridor, with its mix of public and private facilities, provides a unique opportunity for functional and visual reinforcement of activities, achieving a distinctive environment within the City fabric.

Planning areas are aggregated into units called districts. Districts are medium-to-large sections of the City which can be recognized because of some common identifying character, i.e., hillside planning areas. District centers have a mix of larger scale public facilities, higher density housing, and commercial facilities. District centers promote City unity by the establishment of unique facilities in each center that attract residents from other planning areas.



The City is further unified and organized by the open space and circulation systems. The three primary components of the open space system are the open space spines, preservation areas, and recreation/open space activity centers, which are fully described in the Conservation and Open Space Element. The open space spines serve to join the northern and southern districts of the City. The recreation/open space activity centers provide connections between planning areas. The open space system is especially important in the flatland planning areas, where it is a defining element, giving an overall design character to the development. The open space system provides general corridors for many elements of the City-wide and regional circulation systems.

The circulation system, which is described in the Circulation Element, is a multi-modal system. Residential planning areas are connected together, to the major employment districts, and to the district centers through public transit, trail, and road systems. The hiking and equestrian trails provide access to the open space system. The widely spaced arterial highway and freeway grid maintains the integrity of the planning areas by defining planning area boundaries and routing through trips around the residential planning areas.

### Trends

Plans for entire new planning areas are being prepared, as development in existing residential planning areas is completed. As the plans for new villages are formulated, the open space system will play an increasingly important role when development adjacent to the north-south open space spines is implemented. As the development of planning areas expands, it will become increasingly important to create a unified City image. As the City continues to grow, urban design features will continue to be implemented as part of the development process.

### Identification of Issues

The following is a summary of major issues in the City of Irvine regarding urban design:

1. Certain entry points and City edges are currently undefined or lacking distinction from adjacent cities. How can Irvine create an identity for the City within the region?
2. The 75-square-mile scale of the planning area and the fact that the freeways strongly divide the City make it difficult to create a unified City. Planning areas can become internalized, instead of being a part of the larger City. Given these constraints, what can be done to create a unified City?
3. While the citizens of Irvine wish to maintain quality design in the City as it develops, over-control of design could lead to sameness and controlled sterility. How can a balance be achieved?

### Response to Issues

The urban design structure responds to a varied set of citizen objectives and planning area constraints. Utilization of the following goal, objectives, and implementing actions increases the ability of the City to implement the urban design structure.

GOAL B

URBAN DESIGN ELEMENT

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Create a visually attractive, efficiently organized, identifiable, and hill-related City.

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This goal is supported by the following adopted objectives and implementing actions:

## OBJECTIVE B-1

Create a visual and active identity for the City within the region.

### Implementing Actions:

- a. Develop, where possible and appropriate, identifiable City edges, pathways, entry points, and landmarks that distinguish Irvine from the surrounding region.

## OBJECTIVE B-2 DESIGN COMPONENTS

Create a hierarchy of City components that consist of city, district, planning area, neighborhood, project, and building scales and utilize architecture to help reinforce the identity and image of those components to create visually beautiful and functional buildings.

### Implementing Actions:

- a. Utilize building masses, architecture, and landscaping to create a sense of unity within variety for the various components of the City.
- b. Emphasize planning areas as important community elements with diverse characteristics within a unified framework.
- c. Implement the concept of a multiple focal point City, designed to minimize congestion, support a dispersed, auto-competitive transit system, encourage conveniently located facilities and services for each district, and create City unity by establishing some unique facilities in each center that will attract residents from other districts.
- d. Require that all village and district center planned community designs respond to the network open space concepts described in the Conservation and Open Space Element and to the Environmental Factor Overlays contained in the Zoning Ordinance.
- e. Create detailed system designs for the critical Citywide structuring elements of open space, circulation and major edges, and entry points in coordination with appropriate county, state, and federal agencies and with The Irvine Company and University of California, Irvine.
- f. Establish, in cooperation with the Irvine Unified School District, University of California, Irvine, and The Irvine Company a program of public information and education regarding the proposed urban design framework and ongoing urban design process.
- g. Distinguish planning areas in character and physical appearance from each other, considering the following characteristics:
  - Physical and visual separation and differentiation
  - Physical compatibility with the local environment including topography
  - A mixture of housing types and densities
  - A range of age and income groups
  - A variety of public and private facilities
  - Activity nodes
  - A varied "skyline"
  - Functional relationship between the parts and elements of the community
- h. Continue the utilization of Citizen Urban Design Committees for the various aspects of urban design implementation outlined in the General Plan.
- i. Encourage building design criteria on not only architectural styles, but on functional requirements such as solar and wind orientation, maintenance, privacy, etc.



## Standards

(Reserved)

## Related Objective Numbers

Land Use Element - A-2, A-5

Housing Element - C-3

Circulation Element - D-2, D-3, D-4, D-5, D-6, D-7

Scenic Highways Element - E-1

Public Facilities Element - G-1, G-2

Parks and Recreation Element - K-1

Conservation and Open Space Element - L-1, L-3, L-4

## Compliance Regulations

City of Irvine Zoning Ordinance

California Subdivision Map Act

City of Irvine Subdivision Ordinance

California Environmental Quality Act and implementing procedures

City of Irvine Uniform Building Code

City of Irvine Landscape Design Manual

City of Irvine Street Design Manual

City of Irvine Hillside Development Manual





## I-C

### HOUSING ELEMENT

The Housing Element is the component of the General Plan mandated by Article 10.6 of the Government Code (Section 65580 et seq). The Housing Element provides citizens and public officials with an understanding of the housing needs of their community. It evaluates the capacity of the existing housing supply to provide all income groups with decent housing and projects what housing needs are anticipated in the near future. This analysis forms the basis from which Irvine has developed goals, objectives, and implementing actions to address these needs.

#### Description of Housing

The State Housing Element requirements specify that local jurisdictions shall make adequate provision for the "existing and projected housing needs of all economic segments of the community." The requirements further specify that each City's housing element shall include a needs assessment, goals, objectives, and policies relative to the maintenance, improvement and development of housing; and a five year schedule of implementing actions designed to achieve the stated goals and objectives. All objectives and implementing actions in Irvine's Housing Element are consistent with the other elements of the General Plan.

Housing needs in Orange County have gained broad public attention. In a 1988 Los Angeles Times Orange County poll, 84% of respondents agreed that "children growing up in Orange County will not be able to afford housing here as adults." According to the poll, 61% thought that "local governments should control the amount of money landlords can raise housing rents each year" and 64% agreed that "builders should have to provide 'affordable housing' for people at various income levels in their new developments." Clearly, many Orange County residents think that local governments must get involved in resolving the affordability problem.

In April, 1986, United Way issued an extensive Orange County Needs Assessment. The Assessment study found that housing was the top issue of concern of community leaders, and a public opinion survey found it to be second on the list of concerns in all areas of the County, with transportation being first.

The health, safety, and welfare of Irvine residents is linked to the stability of Orange County's economy. The more diverse the economic base of a region is, the less sensitive it is to disruptive swings in any particular industrial sector. The degree to which the County's economy is diversified depends on the range of skills available in its labor force. Whether or not an adequate



labor force is available depends greatly on the availability of housing for all income groups.

The range of housing opportunities available in individual jurisdictions in Orange County differs depending on their historical development and current market conditions. Future additions to the County's overall housing stock will not be affordable to very low, low, and moderate income households unless the public and private sector take actions to encourage the provision of such housing. In order to distribute the provision of low-cost units on an equitable basis, each jurisdiction in Orange County will need to encourage the provision of sufficient low-cost units, so that people employed in the jurisdiction also have an opportunity to live in the jurisdiction. In doing so, it must be recognized that each jurisdiction has unique characteristics such as its topography, age of housing stock, growth rate, and land values which affect its ability to respond to housing needs.

Irvine's responsibility along with other Orange County cities is to strive to ensure that, as its housing stock expands, the proportion of units which are affordable to different income groups enables the County to retain a diversified labor force and to provide a range of housing opportunities.

#### Evaluation of the 1984 Housing Element

State law requires each housing element update to evaluate the previous element for performance. The City of Irvine, a master-planned community, has become a model to many other cities for its housing policy. Irvine has reached the forefront in promoting new construction of very low and low income rental units, and in addressing the homeless issue.

One of the major policy goals of the 1984 Housing Element is the implementation of the Inclusionary Housing Program (IHP). Irvine, through its Inclusionary Housing Program, has been successful in encouraging a balance of housing types. The City has large planning areas called "villages" and requires that a certain percentage of affordable housing be incorporated into each new village at the time of zoning. From 1983 to 1988, the City issued building permits for approximately 10,310 residential units. Of the projects submitted and approved, 275 units were affordable to very low income households (for households earning under 50% of the county median income), 873 units were low income (for households earning under 80% of the county median income) and 1142 units were directed to moderate income households (for households earning 80-120% of the county median income). As an incentive to the creation of affordable housing, Irvine issued a 100 million dollar tax-exempt bond for new apartment construction. The Irvine Company, the major landowner of the City, utilized the bonds to construct 1756 apartment units. The City, as a part of its Inclusionary Program, required that 10% of the units be affordable to very low

income households. This was in addition to federal requirements that mandated 20% of each project be affordable to low income households. The City of Irvine also required that a percentage of the units be three-bedroom units to benefit large families. As a part of IHP, the City offered park fee reductions for low and moderate income units and parking reductions for low and moderate for-sale housing.

Another accomplishment of the Housing Element is the City's homeless program. The goal of the expansion of transitional shelter for low and very low income households will soon be met through the securing of \$430,690 from the Department of Housing and Urban Development (HUD), matched by Community Development Block Grant (CDBG) funds, private donations from The Irvine Company, and other private monies. The 5 year program administered by Irvine Temporary Housing, will continue to utilize an apartment setting with extensive supportive services to enable at least 80 people a year a 90-day stay. This is in addition to the existing program already assisting over 80 people a year. In conformance with State law, the City continues to seek other solutions for homeless sites such as additional hotel vouchers from local hotels, use of City owned sites or nearby University land. Recently a group of volunteers completed rehabilitation of two "historical" farmhouses that will now be available to homeless families.

CDBG monies were used in two creative ways to further Housing Element objectives. The Groves Mobile Home Park residents desired to create a stabilized housing environment through cooperative ownership. The City assisted by seeking and receiving a loan of \$513,975 from the State Department of Housing and Community Development to match City CDBG funds of \$250,000. Twenty-one low income residents were then able to participate. Irvine also assisted in the purchase of modular units for subsidized child care for low income households who needed low-cost child care near home or work. This assisted the City in meeting energy conservation goals through the reduction of commute trips. High costs of child care make payment for housing even more difficult.

The City encourages mixed-use in a commercial/industrial area called the Irvine Business Complex. Developers receive incentives if they include very low, low and moderate income housing in their residential projects.

The City fulfills its objective of assisting non-profit development through land write-downs, streamlined permit processing and the reduction of fees. Irvine Housing Opportunities (IHO), a local non-profit organization, continues to pursue affordable senior and family housing opportunities. IHO is also a third-party monitor and screens tenants and buyers to assure that the projects in Irvine meet the City Housing Element requirements.



The City of Irvine continues to fulfill its objective for equal and accessible housing through a contract with the Orange County Fair Housing Council. Last year 787 households were assisted from Irvine.

The City of Irvine executed most of the objectives of the Housing Element. The update creates new time-tables for projects the City was not able to complete due to a lack of staff time and furthers the objectives of the IHP. The update also includes new programs to address housing needs.

### Existing Conditions

Housing Element legislation requires a description of what Irvine looks like today regarding population and household characteristics, land inventory, housing characteristics, housing costs and affordability and employment. The most recent data available has been used to exemplify what characterizes Irvine and the surrounding community of Orange County.

#### Land Inventory and Site Availability

The City of Irvine has been divided into planning areas or "villages" (see Land Use Element and Urban Design Element). This planning approach maintains a sense of neighborhood cohesiveness and provides a sense of identity. Both the zoning and residential development process use the planning area as the basic planning unit.

The General Plan has approximately 9,822 acres designated for residential purposes within the current City jurisdiction (Figure C-1). The City also has a northern sphere of influence which includes a potential 5,995 acres for residential purposes. The land is not currently under City jurisdiction. These are the planning area designations of #1-7 and 9. Additionally, residential acreage at MCAS El Toro and U.C. Irvine totals 842 acres.

The General Plan establishes five residential categories. Each category has a permitted range of dwelling units per gross acre (Estate Density, .1-1.0 dwelling unit/acre; Low Density, 1.0-5 dwelling units/acre; Medium Density, 5-10 dwelling units/acre; Medium High Density, 10-25 dwelling units/acre; and High Density, 25-40 dwelling units/acre). In addition, the General Plan permits residential development in the following land use categories: Multi-use (25-40 dwelling units/acre); Institutional (25-40 dwelling units/acre); Business and Industrial (25-40 dwelling units/acre); and Military (5-10 dwelling units/acre). The General Plan density ranges are gross acre intensities and include the percentage of the land that will be devoted to the installation of infrastructure. Dwelling unit per acre figures found in the zoning ordinance are based on net developable acres.

Irvine has made it a practice to approve zoning on a "village" or planning area scale which allows review of a development plan for a large area. This process accommodates comprehensive coordination of land uses and cost effectiveness. Most of the vacant land within the undeveloped villages of the City is currently zoned as development reserve to preserve its use for agricultural purposes. This zoning designation allows certain uses such as conventional detached housing with a conditional use permit. Zoning is not considered a barrier to the availability of residential land for development.

As of November 1988, the City had approximately 5,664 net acres with a residential zoning designation. Zoning permits the development of up to 60,578 dwelling units, of which only 46,413 have been developed. This leaves a capacity to provide at least 14,165 additional dwelling units without further zoning approvals. Of this total, UCI area has approximately 3,395 built units within City limits, with a capacity for approximately 6,105 additional units. However, nearly all the available zoned land has been developed. The remaining capacity represents mostly redevelopment potential.

There are other sites made available for residential development. The "activity corridor" in the planning area of Woodbridge and the "core area" in University Town Center allow residential development. Furthermore, all land in the Irvine Business Complex designated business and industrial use may be developed as residential with a conditional use permit. These sites would not require rezoning to allow residential development.

City staff project a residential building rate of approximately 1,760 units per year from July, 1989 to July, 1994. Given this rate of development, it would take over 30 years to build out all areas designated for residential use in the City's General Plan.

There is a potential for the development of 43,812 to 114,324 units on sites in planning areas designated in the Land Use Element for residential uses. Of these planning areas, several may be zoned within the next five years. The potential for residential development during this time period could be as high as the Regional Housing Needs projection of 13,188 dwelling units, or as low as the County projection of 7,915 units. The General Plan potential unit count in each planning area is shown by Figure C-2. It shows that Irvine has General Plan capacity for approximately 21,154 to 69,491 additional units to be built within the City planning areas for land designated for residential uses.

Sites for transitional and emergency housing are available throughout the City. New construction of transitional and emergency housing is possible in all residential areas if the density standards are met. Existing housing could also be used. Currently, Irvine Temporary Housing rents 10 existing apartments



in two locations in the City for 90-day stays. All business and industrial land use areas also could allow these residential uses. A conditional use permit would be required as with all residential uses. Currently, there are no specific zoning classifications for transitional and emergency housing. One of the Housing Element objectives identifies a project where City staff will modify the current land use descriptions and classify their use under the Zoning Ordinance.

Over the next five years, the City expects to entitle land to allow the construction of at least 8,800 units, and sets a goal of entitling land to allow the construction of 13,188 units. A major rezoning effort in the Irvine Business Complex may lead to the capacity for an even greater number of housing units.

The City's amendment to the Land Use Element sets an objective to develop a program to coordinate residential and nonresidential development on a five-year basis, to encourage a better jobs/housing balance. The Housing Element sets an objective to encourage the maximum number of units allowable under General Plan designations for planning areas to be built.

Given the availability of zoned and vacant potential residential sites in the City, it is not necessary at this time to change non-residential uses to residential uses, to supply adequate sites for housing.

#### Population & Household Characteristics

Population: By January 1988, Irvine's population was 97,873. This is an increase of 58% since the 1980 Census population of 62,134. Comparatively, Orange County population in 1980 was 1,932,709, with a 1988 figure of 2,238,721, showing a 15.8% increase or 2% a year. Irvine in 1980 was 3.2% of the County population and in 1988 was 4.4%.

According to the 1980 Census there were a total of 21,337 households in Irvine. Of these, 79% were headed by men and 21% by women. Of family households with persons under 18 years of age, nearly 19% of the total households were headed by a single parent, and 14% of the total households had a female head of household. In 1980, 4,218 people were 5 years or under, or 6.8% of the total City; 13,481 (21.7%) were 5-17 years old; 67.8%, or 42,150 people were 18-64 years old and 2,285 people (3.7%) were over the age of 65 (see Figure C-3 for 1988 projection of age categories). The median age was 29.3 years. In 1988, the City had approximately 37,000 households.

Household Size: The majority of households living in the City of Irvine have between two and four members, with less than 3% having more than six members. There was an average 2.77 persons per housing unit in the 1980 Census. The State Department of Finance

estimated the Irvine household size to be down to 2.57 as of January 1988. Countywide household size or persons per household changed slightly from 2.78 in 1980 to 2.75 in 1988. Regionally, the Southern California Association of Governments (SCAG) estimates a decrease in household size but not as quickly as once expected. The City does not have an overcrowding problem. The 1980 Census identified only 329 households (1.5%) in Irvine as having more than 1.01 persons per room, which is the Census definition of an overcrowded household.

**Income:** The 1988 Orange County HUD median income figure is \$44,400, a 95% increase from the 1980 Census figure of \$22,802. Although Orange County's median income figure is high compared to other Counties in the State, Irvine's median income is consistently higher. In the 1980 Census, the median income in Irvine was \$31,300, or 37% higher than the County median income of \$22,802. More recent income information for the City is not available but assuming the same rate of increase as the County, Irvine's median income in 1988 would be \$60,828. According to the 1980 Census, only 18% of the households in Irvine earned less than \$20,000 in 1979, and 5% of households earned less than \$10,000 (see Figure C-4).

**Ethnicity:** The ethnic diversity of Irvine is very similar to Orange County. According to the 1980 Census, the Caucasian population equals 87.8%, Asian and Pacific Islanders 7.8%, Blacks 1.5%, American Indian, Eskimo and Aleutian 0.3%, and Others 2.6%. The Spanish origin population was tabulated as 6.0% of the City (see Figure C-5).

#### Housing Characteristics, Costs, and Affordability

**Housing Characteristics:** As of November 1988, the City of Irvine had a total of 46,413 housing units. This represents an 89% increase from the 1980 Census total of 22,488 year-round units. Over the 9-year period, the City added an average of 2,214 units per year. Ninety-nine percent of the City's housing stock is less than 30 years old (see Figure C-6).

The County had 829,406 housing units as of January 1988, an increase of 15% since the 1980 figure of 721,514 or 13,487 units a year.

In the 1980 Census, 73% of the City's units were occupied by owners while 27% were occupied by renters, compared to 60% owner-occupied and 40% renter-occupied in the total County.

There is high demand for housing in Irvine. The Federal Home Loan Bank Board lists Irvine as having a 2.6% vacancy rate as of 1987 for eastern zip code area 92714 and a 0.9% vacancy rate for housing in the 92715 western zip code area, compared to the County figure of 2.1%.



In the 1980 Census, the largest percentage of the total units (83%) were single family, including detached and attached units. Fourteen percent (3,186) of the total dwelling units were attached rental units. The University of California at Irvine campus and Christ College also contained apartments and residence halls, totaling 3,698 units. At the time of the 1980 Census, mobile homes in two developments accounted for 3% or 642 of the total year-round dwelling units in the City.

From 1981 to 1986, about 79% of all housing built in Irvine was multi-family including both rental units and attached ownership units. In 1985 and 1986 Irvine had a spurt of rental housing construction, due in part to the availability of tax-exempt bond financing. At the end of 1984, the City had approximately 3,169 apartments, and by the end of 1986 approximately 5,185 apartments. In 1986 1,678 apartments were under construction and 496 were permitted and ready to be built. Currently, approximately 20% of all housing units are apartments (7,590 units). The majority of apartment units in the City are owned by The Irvine Company, and approximately 1,150 apartment units are owned by other companies.

**Housing Cost:** The County's June 1988 median resale detached home prices of \$211,038 was one of the nation's highest (see Figure C-7). The Irvine Board of Realtors found that \$209,000 was the median resale price for attached and detached units in Irvine as of June 1988. Although Irvine's sales prices are high, Irvine was ranked in the lower half of a listing of average sale prices of homes in 13 South Orange County communities (see Figure C-8).

In Irvine, the lowest priced new market-rate three-bedroom 1,558-square-foot single detached new home in Westpark in June 1988 cost \$255,000, and the lowest priced new one-bedroom attached homes had prices starting at \$101,990 (see Figure C-9).

The Orange County Apartment Association lists the average County rent in their Fall 1987 survey of 9,935 units to be \$640 for a two-bedroom unfurnished unit. About a third of the units were occupied by households having resided two years or longer, another third by those there one to two years and a third less than one year. The 1988 Orange County Annual Survey found the average apartment in Orange County to be \$680, up 6% from the year before.

Rental unit costs have increased in Irvine. For example, one of the largest complexes, Parkwest Apartments, rented a two-bedroom apartment for \$245 to \$275 a month in December 1975. In May 1988, 12 years later, the same unit rented for \$785 to \$860 a month, a 220% increase.

As of May 1988, conventional one-bedroom apartment units in Irvine ranged from \$676 - \$930 a month, two-bedrooms ranged from \$765 to

\$1,185 a month, and three bedrooms started at \$1,040 and rented up to \$1,165 a month.

**Affordability:** The City has defined various income categories based on the median income for the County. These categories are important elements in housing analysis. The HUD area office establishes median incomes on a regular basis by adjusting the census median household income with wage data from County business patterns and current population reports. HUD also utilizes income categories by household size. This criteria establishes lower income criteria for a household of one person versus a family of four (see Figure C-10). The City has established the following categories: Income I for households earning 0-30% of the County median income (or in 1989 up to \$14,070 a year for a family of four); Income II for households earning less than 50% of the County median income (or \$14,070 to \$23,450 a year in 1989 for a family of four); Income III for households earning 50-80% of the County median income (or \$23,450-\$37,520 a year for a family of four); and Income IV for households earning 80-120% of the County median income (or \$37,520-\$56,280 a year for a family of four).

The City's Income I and II are equivalent to what is referred to in some funding programs as "very low" income. Income III is equivalent to what is known as "low" income. Income IV is equivalent to the "moderate" income category.

Only 22% of the County's households in June 1988 could afford a County median-priced resale detached home (\$211,038), according to the California Association of Realtors (see Figure C-12). The housing affordability gap is at its highest, with homebuyers needing to earn an income of \$65,559 a year to afford these median-priced homes, assuming a down payment of 20% for a 30-year loan with a 9.31% interest rate. Under this scenario a monthly housing payment is \$1,639. Median incomes from 1979 to 1988 rose only 70%, compared to a 114% increase in the price of a median priced resale home in Orange County (see Figure C-13).

Under Federal guidelines, affordability occurs when a household pays 30% or less of their income for housing cost. For the majority of purchasers of housing in the early 1970s, housing cost in Irvine was less than 30% of their income.

Of the 1980 moderate income owner households in Irvine, 17% were paying more than 30% of their income for housing; and of the low income households, 10% were paying more than 30% of their income for housing (see Figure C-14). According to the Irvine Board of Realtors, the median price of a home sold in March 1988 rose \$26,000 over the previous year. Comparatively, median incomes in Orange County increased approximately \$2,000 from 1987 to 1988, according to the 1988 Orange County Annual Survey. An example of monthly homeownership costs for moderate and low income families



shows the strain of housing cost. A new one bedroom unit with tax-exempt bond financing cost \$1,087 a month in June 1988.

The amount of ownership cost is strongly related to when the household purchased the home. According to the 1988 Orange County Annual Survey, seventy-five percent of owners who purchased their homes five or less years ago were paying mortgages greater than \$750/month. Only 12% of those who purchased homes at least ten years ago paid more than \$750/month.

Rental units have also been unaffordable to many households. High rent costs have an increased affordability burden on low income households. In the 1980 Census, only 10% of Irvine moderate income renter households paid more than 30% of their income for housing, while 25% of the low income renter households paid more than 30% of their monthly income for housing (see Figure C-14). The Southern California Association of Governments estimates that of the 7,316 low and very low income Irvine households, 2,601 households, or 35.5%, currently pay more than 30% of their income for housing in Irvine. Of these, 70% are renter households. With a typical two bedroom rental cost of \$850/month, a household income of \$30,600, or 76% of the 1988 HUD County median income, would generally be required. In all inclusionary and affordable housing units, the City requires the units to be priced so that no more than 30% of the top of the income category is paid by households.

The most recent information from the State Employment Development Department shows the average wage for all County industries per employee to be \$20,475 a year in 1985. In 1980, manufacturing, particularly durable goods, was the leading industry employment category in Irvine followed by services and construction and then trade and government. The corresponding average wage in Orange County in the manufacturing industry was \$25,066/year. Construction wages were an average of \$24,715 and services were \$19,127. Government labor averaged \$21,090, wholesale trade was \$24,299, while retail trade offered salaries averaging \$12,512. The estimated 15.5% of Irvine employees in services and the 5.5% in retail trade would also have been the labor categories having the most difficulty in finding affordable housing in Irvine. All categories without two wage earners would also have difficulty. As an example, manufacturing wages average \$2,089 a month, meaning "affordable" housing costs would need to have been \$627 a month average in 1985 for a single wage earner household. According to the 1980 Census over 60% of all employees in Irvine made less than 80% of the median income, and would be eligible for "low" income housing (see Figure C-15).

## Employment

The total wage and salary employment which includes full-time and part-time employees in 1988 in Orange County totaled 1,094,700 in 1987. The County forecasts 4.6% unemployment in 1988 with

employment reaching 1,134,900, up 3.7% from 1987. The type of employment in Orange County seems to have been changing. Manufacturing employment declined from 35% of total employment in 1967 to 23% in 1987. The services industry accounts for 24% of employment today; up from 17% in 1970. Retail trade has kept consistent at around 19% of total jobs.

The 1980 Census listed 34,666 Irvine residents in the labor force, primarily in private wage and salary businesses. This represented 75% of the Irvine residents over age 16. Of those in the labor force, 56% were men and 44% were women. Sixty-two percent of the families had two or more workers. The majority of persons were employed in managerial and professional specialty occupations, closely followed by persons in technical, sales and administrative support including clerical positions. The unemployment rate was less than 3% in 1980.

**Irvine Workforce:** An important employment factor pertaining to Irvine's housing need is those persons working in Irvine, whether or not they are residents of Irvine. In 1980, City staff estimated that 68,741 persons were employed in businesses located in the City of Irvine. This increased by 75% to 120,123 people by 1987. In 1987, 88,989 persons working in the City were employed in businesses located in the Irvine Business Center (IBC). The second largest employment area is the Irvine Industrial Complex - East (IIC-E) where 14,006 persons were employed in 1987. The largest employers in one location within the City continue to be the University of California, Irvine, and Fluor Corporation and McGaw Laboratories in the IBC area (see Figure C-16). The largest employment type in Irvine in 1988 is "Electronic Components and Accessories" (see Figure C-17). 1980 Census information revealed that 25% of Irvine's residents worked inside the City limits and 86% worked inside the County limits. The median travel time to work was 20 minutes, which was slightly less than the average commute time for all County residents.

### Conservation of Affordable Housing Stock

The City of Irvine housing stock provides a range of choices for all income groups. Preserving the quality and affordability of the housing stock is vital to continuing to meet housing needs.

**Physical Conservation:** Due to the relatively young age of Irvine's housing, no rehabilitation programs are required at this time, but they may be needed in 5-10 years. The City continues to monitor Building Code Compliance by inspection to monitor potential rehabilitation needs.

**Conservation of Affordability:** Conservation includes maintaining the affordability of housing, particularly low-cost housing. For affordable housing units established pursuant to Housing Element goals, this is achieved primarily through an independent non-



profit agency who reviews applications for inclusionary or affordable housing units, assuring that each unit is rented to the income group designated. Also, the various funding programs used in Irvine to develop low-cost rental housing define the term of affordability and preserve affordable housing for 10 to 30 years through agreements with the owner. Tax-exempt bond financed units in Irvine have an additional two-year transition period over Federal 10-year requirements, to allow a slower conversion to market rate. This allows time for the City, renters and the owner to find a way to keep the units affordable for a longer term and avoid immediate rent increases.

The City is concerned about the future loss of affordable units through the expiration of programs providing subsidy payments or insured mortgages. From July 1, 1989 through July 1, 1994, there are 60 affordable units at risk of converting to other uses. During the five-year Housing Element period of July 1, 1994 through July 1, 1999, there are 989 affordable units, funded through public assistance and/or conventional financing, that are at risk of converting to market rate housing. These units comprise approximately one third of the existing affordable rental housing stock. See Figure C-22 for more information regarding these units.

Cost of Conservation of Affordability: Construction of new affordable units to replace existing affordable units as they convert to market rate will be more costly up front than renewing subsidies. Construction of Income II units require subsidies of approximately \$47,000 to \$60,000 per unit, and Income III units require subsidies of \$7,900 to 21,000 per unit (source: "Economics of Affordable Housing Development," prepared February 1990 and updated in March 1992, by Rosen & Associates). In comparison, renewal of subsidies, such as refunding bond issues, has only a minimal administrative cost to the issuing agency. For those units funded conventionally, sources of subsidy for the owners or rent assistance for tenant will have to be identified. Rent assistance for one year for an Income II unit would range from \$4,000 to \$6,700 and for an Income III unit from \$200 to \$2,000. Figure C-23 provides a more detailed analysis of the costs of conservation. Figure C-4 identifies some of the resources potentially available to the City for the conservation of affordable units.

### Energy Conservation

The City currently has an Energy Element as a part of the General Plan. This document reflects current City policy regarding energy conservation. The City Energy Element directs staff to encourage the incorporation of design features and energy conservation measures during site design review. The City has several clustered developments which allow energy conservation due to site locations. As a part of development processing, the City enforces Title 24 to assure state energy standards are met.

## Accessibility

Providing housing opportunities for all people, regardless of race, color, religion, sex, marital status, age, national origin, ancestry or disability is essential for meeting housing accessibility goals. Accessibility can also be viewed in terms of making units physically adapted to the needs of the physically disabled.

The City of Irvine contracts with the Orange County Fair Housing Council, a local non-profit, who counsels and investigates discrimination complaints from City residents. In the 1987-88 year, the Fair Housing Council assisted 787 Irvine residents with discrimination and housing complaints. This is approximately 3.2 percent of the residents Countywide requesting assistance. The City Council recently adopted a human rights ordinance for the City which gives additional protections.

The City continues to work towards new ways to assure that housing opportunities are available to all people.

## Constraints on Housing Development

### Market Constraints

The City of Irvine occupies a central location both within the Los Angeles - San Diego urban corridor and in Orange County. Regional trends in the cost of land, financing, and materials, as well as the relationship between the supply of and demand for housing, have had an impact on Irvine's housing situation.

The City of Irvine is in a unique situation because almost all of the undeveloped land in its jurisdiction is owned by one corporation, The Irvine Company (TIC). The Irvine Company controls the pace at which their property is developed. The Company does extensive marketing research and adjusts the type and volume of housing available at any given point in time. Because of this, it is expected that the supply will not exceed the demand.

The Irvine Company has been cooperative in trying to find ways to provide lower cost housing in response to the City's inclusionary zoning requirements. They now have experience with submitting proposals for Section 235, Section 8, California Housing Finance Agency funds and mortgage revenue bond programs. They have made sites available to builders for Section 8 and Section 202 projects. The Irvine Company's willingness to use government housing programs and bond issues, and to build low-income housing is an important asset to the City in trying to meet its housing needs.

Cost of Residential Land in Irvine: Exact measurements of land value and cost are difficult to obtain because The Irvine Company owns most vacant potential residential land. The 1985 cost for unimproved medium density residential land in Irvine was appraised



at \$400,000 per acre in the newest village of Westpark. In May 1988 the appraised value was near \$662,500 in Westpark for medium density property. This means at least a 66% increase in land value since 1985 or approximately 22% a year. Medium high density lots were appraised at \$568,000/acre in University Town Center and \$480,000/acre in Northwood, two villages almost at build-out. Infrastructure improvements such as road improvements, bringing utilities to the site, and rough grading for lots and roads may account for up to 30% of the acre cost identified above. Higher density developments may result in lower land costs per unit. In Irvine, land can represent at least 30% of the housing cost.

**Construction Costs:** The cost of construction, including supplies, materials and labor cost, has been increasing. Over the last five years these costs have increased approximately 19% (or 3.8%/year) according to the Construction Industry Research Board. The basic construction costs vary depending on type of structure and adjustment for amenities built into the unit, but it is unlikely that multi-family housing in Orange County could be built for less than \$46/square foot, taking architectural, structural, electrical, plumbing, and mechanical work into consideration. A local non-profit corporation, the Orange County Community Housing Corporation, estimates a 1025 square-foot 3-bedroom family unit costs approximately \$57,000 to construct and a senior 540-square-foot unit costs approximately \$42,000 in 1988. In Irvine, construction costs are approximately \$45 to \$60 a square foot.

**Availability and Cost of Financing:** Interest rates are affected by demand and the primary and secondary market supply. Interest rates have a direct effect on the cost of housing to the consumer. A change in the interest rate from 10% to 12% on an \$125,000 house, assuming a 20% down payment (\$25,000) and a 30-year fixed loan, raises the monthly mortgage payment from \$858 to \$1,029, or \$171 more per month. Financial institutions can also affect initial housing costs through the amount they require for down payment on mortgage loans. In 1988, interest rates were around 10.5% for 30-year conventional loans (see Figure C-17). Typically lenders look for a 28-30% ratio of gross monthly income to housing payment costs and a 36-38% ratio of net effective income to housing payments for a 90% fixed rate loan.

**Age of Irvine's Housing Stock:** Less than one percent of the units in Irvine are more than 28 years old. It cannot be expected that a city at Irvine's stage of development would provide the same spectrum of housing prices and rents as Santa Ana, Anaheim, Fullerton, or Orange, which have developed over the last 80-90 years. One of the resources available to these cities in meeting their needs for lower cost units is their older housing stock. In Irvine, however, any attempt to meet the growing need for low-cost housing must rely principally at this stage on newly constructed units. By the turn of the century the City will have a greater age

range in its housing stock and will have a greater range in housing values.

### Government Constraints

The California Legislature has delegated to local jurisdictions specific responsibilities and a certain amount of discretionary authority over the development and use of land. Through building codes, development procedures, requirements, and fees, cities and counties influence the location, density, type, number, quality and appearance of housing units in their jurisdiction. These actions, in turn, affect the cost and availability of housing not only within their boundaries but in the region as a whole. This section reviews Irvine's existing General Plan; other actions by local, state, and federal government agencies; and the development process to ascertain their impact on the City's ability to respond to its housing needs.

**Irvine's General Plan:** Through the general plan, local jurisdictions attempt to resolve competing priorities and concerns. While housing is important, it is only one of a number of issues which municipalities must address. Irvine's General Plan, especially its Land Use Plan, establishes the framework for development in the City. It provides the context in which Irvine is addressing its housing needs. In addition to the Housing Element update, the City is updating the Conservation and Open Space Element and the Community Facilities and Human Services Element to coordinate current City needs. In terms of volume, density, and rate of housing production, Irvine's General Plan is not viewed as a constraint to the provision of adequate housing.

**Development Process:** Irvine's General Plan establishes the potential capacity of housing units which can be built in the City. As required by State law, in order to build these units, developers must obtain a series of approvals to assure that certain standards are met. Builders often complain that government red tape and delays are one reason for the current high cost of housing. However, certain steps in the development process are required by State rather than local law. The City abides by the maximum limits placed on the development process by State law. The City audits its code compliance and development process yearly. The cost of completing the development process is reflected in housing prices and rents for the consumer.

The Zoning Compliance Services function is being added to the Community Development Department as of July 1989. Compliance Services will have the purpose of ensuring compliance with the conditions of project approval and expediting the development review process for those who do meet the conditions of project approval. Once an applicant has completed the conditions of approval review, the project can be expedited through the building



permit review process. The balance of the building and zoning code review is based on the square footage size of the project.

In addition, the City is currently incorporating the City's entire mapping system and review process on a computer system named Geobase.

**Fees:** Irvine has an established policy that fees charged for processing development proposals will cover all costs involved (see Figure C-18). Developers are required to submit a deposit with their request. The size of the deposit varies with the nature of the request and in some cases the size of the project or valuation. The City charges for staff time spent in reviewing these requests on a per hour basis against the deposits for most fees. Some fees, such as development project processing fees, building permit fees, an check fees, and inspection fees can or have been waived or reduced in the case of non-profit developments of Income I, II and III housing units where affordability is for a 30-year term.

**Cost of Public Improvements:** In the past, many communities have approved bond issues to pay for the construction of capital improvements required by new residential development. The recent trend has been to require each new development to pay its own way rather than have all the existing residents pay the cost through a broader base of financial support such as local taxes. Now the entire cost is carried by the developer who passes it on to the eventual buyers or tenants. The City, realizing the extreme problem this presents to developers of low-income housing, has placed the bulk of Community Development Block Grant annual funds for the last three years in the City's inclusionary or affordable housing cost reduction program to be used for land-write downs to assist inclusionary housing producers in meeting these rising costs.

More recently, some of the largest public improvement costs charged to developers are "corridor" fees. Fees for two transportation corridors are now charged directly to all developers of residential projects and given to a regional body vested with authority to collect the fees to construct the corridors. These costs are added to the price of the unit or are taxed on a monthly basis as a special assessment. The City is investigating the deferment or waiving of these fees for non-profit owned housing.

**Building Codes and Design Requirements:** Building construction standards in Irvine are based upon the 1985 Uniform Building Code. This Code is updated on a regular basis. The City also utilizes the Uniform Plumbing Code, Housing Code, Electrical Code, and Swimming Pool Code, and enforces Title 24 regarding Handicapped and Energy provisions. The City Building and Safety Division is also considering a voluntary program to inspect units upon resale to maintain code compliance.



Actions of Other Public Agencies: In many instances, decisions by other cities, counties, and state agencies have restricted the regional supply of land available for development or the cost of construction. These actions can increase sales prices and rents. As an example of public agency impact on development cost, school districts now impose school impact fees on new housing developments as authorized by State law. This is a constraint on the affordability of new housing, particularly affecting the lower income units.

#### Environmental Constraints

The City has land areas not conducive to residential use. Currently 1,751 acres of the City are within air crash hazard zones of the Marine Corps Air Station El Toro.

Some topographic limitations exist in hillside areas. The City has a Hillside Ordinance that protects the existing landform if slopes are 30% or higher. Development is concentrated on slopes of less than 20%.

#### Special Housing Needs

Special housing needs relate to those people who have, as a population group, more difficulty in finding suitable housing. For the City of Irvine they include large families, the homeless, the disabled, seniors, single parent as head of households, students, military and farmworkers. In many cases, the most recent and accurate count of the population comes from the 1980 Census. It is difficult in the case of some population types, such as students, to assess housing need, because this population was not measured in the Census. When possible, Census figures are updated with other sources.

Large Families: The 1980 Census indicates that 10.6% of the total households in Irvine, or 2,267 households, had five or more members. There are currently 780 three-bedroom apartments (10.3% of the total 7,590 apartment units) and 18 four-bedroom apartments (0.2% of the total apartments) in Irvine.

Because most rental residences are efficiency, one and two bedroom units, some large families may need larger units or may live in overcrowded conditions. Large families also encounter problems in obtaining adequate housing when landlords place extreme limits on the number of persons per bedroom allowed, such as renting to no more than one person per bedroom.

Homeless: In May 1985, the Orange County Homeless Coalition completed a survey of the homeless at provider sites. The survey indicated that during the month 3,169 individuals sought help from service providers and needed shelter or permanent housing in Orange County. Of these, 1,176 (37%) were children. Sixty-six (66%)

percent had lived in Orange County for over a year, and the median number of years people had lived in Orange County was ten years.

In the last three months of 1988, Irvine's local provider, Irvine Temporary Housing (ITH), received 45 calls from Irvine households needing shelter, equaling 126 people. In 1988, ITH sheltered 20 to 27 people at any one time. ITH received other calls as well from other areas. Most of the households asking for assistance average three people. If we make a conservative assumption, Irvine individuals needing assistance in any 3-month period equal 126 individuals, in addition to the minimum of 20 people assisted by ITH during the same 3-month period. Assuming that during a year time period, 25% of the households might call for assistance again, a maximum of 458 Irvine individuals might need shelter in a year  $[(126 \times 4) - 25\% + (20 \times 4) = 458]$ . Therefore Irvine's homeless are estimated to be at least 146 people during a 3-month period and a maximum of 458 people during a year period, with at least 50% of the households being families with children.

The homeless are in need of permanent, affordable and decent housing, and may need other supplemental services such as food, subsidized child care, housing search assistance, and employment training. Eighty-five percent of those interviewed in the Homeless Survey indicated they were "sometimes or frequently hungry."

Disabled: The disabled population is difficult to measure due to the lack of comprehensive surveys. According to the 1980 Census, 468 Irvine residents had public transportation disabilities. In 1985 the United Way Needs Assessment Study estimated that approximately 17% of the County population is physically or mentally disabled. Based on Irvine's 1988 population this would equate to 16,638 people living in Irvine. According to the State Department of Rehabilitation, Irvine's physically disabled looking for employment would total approximately 3,351 people aged 16-64 as of July 1988. This is approximately 3.4 percent of the total population. The Dayle MacIntosh Center for the Disabled recently conducted a countywide needs assessment and found that one of the major needs identified by the disabled community was for affordable and accessible housing. The physically disabled frequently encounter housing limitations due to the lack of adapted kitchens, bathrooms, and entryways; limited proximity to transportation; and discrimination.

The City has a model Disabled Transportation System. All HUD assisted senior and family projects in Irvine set aside units for the physically disabled. Currently, the City has 45 Federally subsidized units that are wheelchair accessible. The City also complies with State Title 24 adaptability regulations. These requirements apply when there is new construction of private apartment complexes larger than 5 units. Developers are required to allot at least \$780 per ground floor unit to meet adaptability under State Housing and Community Development (HCD) guidelines.



The City monitors compliance. The State law is currently being reviewed for possible revision. Very few developments have constructed units adaptable enough for wheelchair access because of exemptions or a lack of clarity with regard to the amount of adaptability necessary. The City has also funded a homeless shelter for the disabled run by the Dayle MacIntosh Center in Garden Grove.

The Orange County Regional Center coordinates group homes for the developmentally disabled and works with five group homes (including Sutton Homes) housing 12 adults and 18 children in Irvine. Currently, the Community Services Department of the City is working towards independent housing opportunities for developmentally disabled Irvine high school children who are seeking self-sufficiency, but who find unaffordable units or face misperceptions or discrimination. The City can work with these groups to ensure that there is not undue limitation placed on homes for the disabled and that this population is more understood.

The mentally disabled population is more difficult to assess. New findings from a study sponsored by the National Institute of Mental Health show that almost 15% of the nation's population suffer from major mental disorders. Alcohol and other drug abuse is the most common mental health problem and can be expected in 16.4% of all adults at some time in their lives. Anxiety disorders such as phobias and panic syndromes are the second most common disorders affecting 14.6% Americans during their lives and 7.3% at any one time. The State Department of Rehabilitation estimates that in 1988, 624 people aged 16-64 in the City faced mental disabilities and sought employment through the Department. This population may not need physical adjustments to units, but may need affordable units as they enter or re-enter the mainstream.

Seniors: The 1980 Census shows that Irvine's population included 3,768 people over age 60, or 6% of the total population. Of this total, approximately 221 seniors in 137 households, or 6% of seniors, had incomes below poverty level. The 1980 Census also indicated that 1,824 households had Social Security incomes in Irvine. Today, the ratio of the number of people in the United States over 65 years to the general population is one to eight. By 2020, this will increase to one in six. As with other fixed income populations, seniors need predictable and affordable housing payments. Proximity to shopping, services, community facilities, and public transit are also important.

Woodbridge Manor, Harvard Manor, and Parklands Apartments have over 174 Federally assisted senior low income rentals. The waiting lists for these three projects alone have over 2,000 people. There also are two senior mobile home parks in Irvine providing 889 spaces. Senior housing with congregate eating facilities include Regents Point and Inn at the Park, totaling 563 units. National studies show that most people stay in their existing homes,



however, as the senior population increases approximately 20% of seniors will need low-rent congregate housing facilities with nearby services and continuing care or life-care facilities.

**Single Parent as Head of Household:** The 1980 Census estimated that 18.7% or 1,801 of Irvine's households with persons under 18 years were headed by single parents. Eighty-three percent (1,488) of single parents were women. The Census also estimated that 117 households were headed by women below the poverty level. Aid For Dependent Children, a federal assistance program to dependent children in single parent households, is currently utilized by 172 households in Irvine. Many of these households have difficulty in finding permanent affordable housing unless it is subsidized. Single parent households pay much greater portions of their income towards rent, on the average 58%, according to a 1988 Joint Housing Institute study. Approximately 50% of the Federally assisted units in Irvine are rented by single parents and their children. Proximity to child care and other services is an important consideration for housing location for this population.

**Students:** The three major educational institutions in the City of Irvine are the University of California at Irvine (UCI), with approximately 14,700 students, Irvine Valley College with 5,300 students, and Christ College with 515 students for the 1987-88 school year. Both UCI and Christ College have housing on-campus. In the 1987-88 school year UCI had 3,568 students housed on-campus in approximately 1900 units and estimates that 28% of the undergraduate students and 40% of graduate students are housed on-campus. Other students live off-campus in rentals primarily in Newport Beach or Irvine, rent rooms in homes, or live at home. UCI plans to build approximately 570 more units in the next five years to accommodate approximately 1300 more students. Christ College has 140 units with 90% of the students living on-campus.

**Military:** Marine Corp Air Station (MCAS) El Toro is located in unincorporated Orange County within Irvine's sphere of influence and MCAS Tustin is in the adjoining City of Tustin. As of October 1987, 1,644 civilians and 8,038 military were on the El Toro base, and 96 civilians and 4,193 military were on the Tustin base, totaling 13,991 personnel for both bases. The number of bachelor units in barracks on the Tustin base is approximately 1,800, and 4,000 units exist on the El Toro base. The number of family units available on the El Toro base is currently 1,252 and 1,259 are located on the Tustin base. This means that approximately 3,920 military households (both single person and family) must seek housing off-base. There is currently a waiting list of six months to three years for on-base housing. Future plans include the construction of 225 units in 1989, 300 units in 1990, and a possible 80 mobile home spaces, all on the Tustin base.

Approximately 40% of the military personnel are married. According to the Tustin and El Toro Stations, most military personnel are

stationed for two or three years, which makes them a highly mobile population. Military personnel find that with very limited incomes it is increasingly difficult to find housing in Orange County. Clearly more available low-cost housing is necessary for the military.

**Farmworkers:** The Irvine Company, the City's major landowner, generally leases land to other growers and nurseries and currently leases over 9,980 acres in Irvine and its sphere. The Irvine Company itself has 14 agricultural employees in Irvine as of June 1988, and houses 5 of their farmworkers in housing on Irvine Company land. Leaseholders of Irvine Company land in Irvine and its sphere (under the County's jurisdiction) have indicated that approximately 1,206 to 3,761 people are "seasonal" employees (see Figure C-19). Most of the workers have hourly wages of \$4.25. Many farmworkers work harvesting row crops such as celery, asparagus, strawberries, and cabbage, or work in the large nurseries. Many of these crops require almost year-round labor, indicating very few months when workers aren't required. In a recent World Almanac survey of 250 jobs, migrant farmworking scored the lowest on the basis of a good environment, income, security and outlook, physical demands and stress.

Housing for workers is available at a 200-bed labor camp within Irvine's sphere of influence for \$14/week, or \$59.50/week including two meals a day. Employers indicate most workers live in Santa Ana.

### Trends

#### Employment Trends

Between 1987 and 1994, the City expects an increase in the number of employees by 47%.

The projected future employment for the City by major employment planning areas is:

<u>Employment Center</u> (Planning Area Number)	<u>1987</u>	<u>1994</u>	<u>2010</u>
Biomedical Center (13)	164	10,061	17,151
Irvine Center (33)	438	8,324	22,239
Irvine Research Center (34)	0	3,097	19,944
IIC-E (35)	14,006	28,221	33,335
IBC (36)	<u>88,989</u>	<u>88,989</u>	<u>137,253</u>
Total	103,597	138,692	229,922

Source: File 6, Preferred Square Footage, Employment Totals, City of Irvine



Commercial and Industrial land uses are planned to utilize up to 118 million square feet in Irvine by the time of build-out of the City (see Figure C-20).

Employment by types of uses is:

<u>LAND USE</u>	<u>SQUARE FEET PER EMPLOYEE</u>	<u>1987</u>	<u>1994</u>	<u>2010</u>
Vill Comm	370	1893	2779	2941
Dist Comm	370	645	1483	1483
Spec Comm	370	961	1735	1735
Gen Comm	370	3908	6491	11555
Reg Comm	370	0	541	2302
Comm Rec	370	457	776	776
Instit	320	8636	12477	16156
Med Office	320	1019	1832	3047
Office	320	62280	79735	164337
Mfg/Whse	620	31950	37222	27938
R&D	320	6775	30546	49159
Hotel	948	<u>1598</u>	<u>1598</u>	<u>2924</u>
TOTAL*		120,123	177,215	284,353

\*Does not include UCI and Military Use.

Source: File 6, Preferred Square Footage, Employment Totals, City of Irvine.

#### Housing and Population Trends and Irvine's Housing Need

The City projects a population increase of approximately 5% per year from 1989 to 1994. The County projects that Irvine will reach 45,863 housing units by 1994, a growth of 7,915 units from 1989 to 1994. Countywide, 921,528 housing units are projected by the County for the same 5 year period. Irvine projects that the City will have 9,984 new housing units built including University of California, Irvine and Marine Corp Air Station areas, and be close to 5% of the total County housing units by 1994.

The State Housing Element requirements specify that local jurisdictions "shall make adequate provisions for the housing needs of all economic segments of the community." To assist localities in evaluating their regional housing share, the State requires area-wide planning organizations to prepare Regional Housing Needs Assessment numbers (RHNA) for each jurisdiction. The areawide organization which encompasses Irvine is the Southern California Association of Governments (SCAG). Its region consists of Los Angeles, Orange, Ventura, San Bernardino, Riverside and Imperial Counties.

The assessment model is divided into two parts. First, the existing needs are projected from the 1980 Census, counting those Income I, II and III households who pay more than 30% of their income



towards housing. Second, a five-year projection of housing needs is estimated. The State requires that the projection take into account the market demand for housing, employment opportunities, availability of suitable sites and public facilities, commuting patterns, type and tenure of housing need and farmworker criteria in establishing forecast numbers.

The assessment model uses the State Department of Finance numbers for existing households and lists 34,712 households in Irvine as of January 1, 1988. Of these households, 2,601 (or 7%) are Income I, II and III income households paying over 30% of income for housing. Income III is defined as 50-80% of the HUD Orange County median income and Income I and II is defined as 50% and below of the HUD County median income.

Irvine Households Paying More Than 30% Income for Housing in 1988

<u>Total</u>			<u>Owners</u>		<u>Renters</u>	
	Income I & II	Income III	Income I & II	Income III	Income I & II	Income III
2,601	1,293	1,308	379	391	914	918

Irvine's future need is forecasted by viewing overall household growth from 1975 to 1988, vacancies, demolitions, employment growth, and housing units needed to avoid an over or under concentration of households in any one income category. Initially the model's goal for Irvine to meet its housing need, was to produce 14,337 dwelling units by July 1994. From 1983 to 1988 SCAG projected the need was 15,133 units. The City issued 10,310 residential building permits during this time period.

The City of Irvine revised the Regional Housing Needs Assessment projected by SCAG at the City Council meeting of September 27, 1988. The City, due to disagreement with the methodology for disaggregation from the subregion to the City, and the vacancy rate adjustment by SCAG, projected 13,188 units for July, 1989 to July, 1994, versus 14,337 units projected by SCAG.

The breakdown by income category is:

1,675	Income I and II	(12.7%)
1,635	Income III	(12.4%)
2,611	Income IV	(19.8%)
<u>7,267</u>	Above Income IV	(55.1%)
13,188	Total	

SCAG's Community, Economic and Development Committee met on November 17, 1988 and recommended acceptance of the City's revised five year projection. The Executive Committee of SCAG took final action to approve the City's revised number on December 15, 1988.

## Jobs/Housing Balance

SCAG, in its regional housing needs assessment, analyzed the impact of job growth on the southern Orange County region. In order to better balance jobs to housing in this region, the needs assessment quantification (13,188 for the City of Irvine) includes an additional allotment of housing units for jurisdictions having a jobs/housing imbalance.

In addition to a total quantity of housing needed in relationship to the number of jobs, the affordability of the housing opportunities should match the job wages in the jurisdiction.

To address this issue, the City, through its Comprehensive Housing Program, is setting an objective to meet the number of units in each income category identified above. In addition, General Plan Objectives A-1, A-9, C-1, C-6, and C-7 outline what actions the City will take to encourage a balance of housing to jobs.

## Public Participation

The Housing Element Update has been reviewed by the Finance Commission, the Community Services Commission, the Transportation Commission, and the Planning Commission, prior to adoption by the City Council. At these Commission and Council meetings public hearings were held to receive comments. Altogether, over fifteen public sessions have been held. Public notice has been given not only to the major newspapers but to special needs groups, homeowner association's and the housing industry representatives.

Information on special housing needs was offered by interest groups such as the Dayle MacIntosh Center for the Disabled, the Orange County Human Relations Commission and Health Care Agency, the Building Industry Association, The Irvine Company, Head Start, the Irvine Senior Center, the Fair Housing Council, the Orange County Homeless Coalition and Irvine Homeless Task Force, Irvine Temporary Housing, the Tustin and El Toro Marine Stations, the University of California at Irvine and many others.

## Identification of Issues

1. How can Irvine address the housing needs of Income I, II, III, and IV households, particularly those employed or seeking employment in Irvine?
2. How can Irvine implement an effective housing program addressing the special needs of single-parent families, seniors, students, the military, the disabled, farmworkers, the homeless, and large families?



3. Given the high cost of land in Irvine and constraints on development, how can the City make the production of Income I and II housing more feasible?
4. The decrease in federal assistance programs for construction of housing makes the development of affordable housing more difficult. What other funding sources and programs can be used to develop affordable housing?
5. Given the relatively young age of Irvine's housing, there is no current need for rehabilitation or demolition of existing housing stock. What kinds of programs can Irvine implement to insure continued housing quality and maintenance?

### Response to Issues

#### Incentives and Resources

The City offers several incentives to developers who build lower cost housing units. As explained in the Housing Element Evaluation, with the development of lower cost units, the City can if requested waive or reduce fees, provide parking space reductions, or allow park land dedication reductions and density bonuses.

As stated, the City issued a 100 million dollar Tax Exempt Bond for apartment construction and coordinates with the County issuance of Tax-Exempt Bond Financing for both ownership and rental units. The City can pursue additional tax-exempt bond issues.

In addition, the City receives Community Development Block Grant funds. These funds have been used for land write-down, the Transitional Housing Program for the homeless, and formation of a cooperative at a mobile home park. The City will continue to focus the majority of these monies on the production of Income I and II housing opportunities.

State or Federal tax credits are also available to housing producers.

The City, The Irvine Company, Irvine Housing Opportunities, and any other groups can seek housing assistance through a variety of Federal and State programs, but these monies are becoming more scarce. Figure C-21 indicates many potential programs available. As one example, the City with Irvine Temporary Housing last year secured a competitive Federal Grant for a Transitional Housing Program in Irvine. The City matched CDBG monies for the 5-year program and The Irvine Company contributed \$34,000. Recently, the City applied for and received \$27,340 in matching funds from the Federal Emergency Shelter Grant to provide emergency housing vouchers and first month's rents to needy households. The City will continue to seek these resources to make housing opportunities possible.



To address the identified issues, the City has developed the Comprehensive Housing Program. The goals and objectives section of the Housing Element are the components of this program. The schedule of actions includes existing programs, revised programs and new programs the City intends to undertake in the next five years to meet housing needs. Irvine will continue to remain committed to providing housing for all segments of the community.

The City intends to set an objective of the production of at least 8,800 units in the next five years and the conservation of at least 400 units in the next five years.

Within this objective, the City intends to have 1% of all units produced to be affordable to households earning under 30% of the County median income, 11.5% of all units produced to be affordable to households earning under 50% of the County median income, and 12.5% of all units produced affordable to households earning under 80% of the County median income.

The City will also meet this objective through the variety of programs such as the Affordable Housing Needs Goal, the City Financial Partnership Program and the Linkage Fee Program delineated in the Comprehensive Housing Program beginning on Page C-20.

The City's ability to meet these objectives is dependent on the implementation of the City's land use plan, housing market conditions, environmental constraints and the availability of resources.

GOAL C

HOUSING ELEMENT

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Provide for decent housing in a satisfying environment for all economic segments of the community through the Irvine Comprehensive Housing Program.

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To achieve this goal, the City of Irvine has adopted the following Objectives and Implementing Actions:

## OBJECTIVE C-1

Increase affordable housing opportunities through new construction.

### Implementing Actions:

- a. *Affordable Housing Needs Goal*<sup>1</sup> - The City establishes minimum goals for all new dwelling units or the following income categories:

-1% for households earning 0 to 30% of the HUD County median income (Income I);

-11.5% for households earning less than 50% of the HUD County median income (Income II); and

-12.5% for households earning between 50 to 80% of the HUD County median income (Income III).

Specific housing requirements will be established for each planning area, village or land area at the time of City approval. The total number of affordable units may exceed the minimum of 12.5% Income I and II units, and 12.5% Income III units.

If a rezoning to another residential density is requested, a minimum number of affordable housing units to be built shall be established by the City Council at the time of rezoning to assure that a decrease in units villagewide will not decrease the number of affordable housing units produced. If a rezoning is requested for a village or land area from a non-residential land use to a residential land use, then the affordable housing goal applies.

All affordable housing units will be required to be affordable to the designated income ranges for at least 30 years. Ten percent of the affordable units will be required to be three and four bedroom units. For in-fill areas in villages with zoning approval as of the date of the adoption of the Housing Element Update, if a development application proposes a project to be built for, and rented or sold to only elderly and/or disabled persons (as defined by State law), the City will allow the applicant to satisfy the three and four bedroom requirement by providing two additional one bedroom Income I and/or II units in place of each three and four bedroom unit otherwise required by the Housing Element. The housing development must comply with State law requirements for elderly or disabled

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<sup>1</sup>Italicized program names represent revised Housing Element programs.



persons. To provide a balanced mix of affordable units, the City's goal is that ten percent of all affordable housing units required will be ownership units. No less than 10% of all affordable housing units required must be adapted (as defined in Title 24 requirements) for the physically handicapped. The policies delineated in Objective C-4 shall also be addressed in the applicant's affordable housing program requirements.

Result: The City will be able to provide a mix of housing for all economic segments of the community as required by State law. This housing will be affordable to the majority of the work force in the City. In addition, this policy will assure that a mix of units exists in all villages of the City. Assuming at least 8,800 units are built in areas under City's jurisdiction in the next five years, this goals will result in approximately 1,100 Income I and Income II units, for households earning less than 50% of the County median income and 1,100 Income III units for households earning 50-80% of the County median income.

Cost/Sources of Financing: The cost to the City of incorporating the requirements in the appropriate sections of the zoning ordinance is minimal. These requirements are written by the Community Development staff, reviewed by the Planning Commission, and adopted by the City Council. Costs beyond normal processing could be incurred if the Planning Commission or City Council required additional information in order to determine what the requirements should be. This cost would be paid through processing fees. In meeting affordable housing requirements, developers may incur costs.

Responsible Agencies:      Community Development Department  
                                 Planning Commission  
                                 City Council

Schedule: The affordable housing needs program will be implemented after adoption of the Housing Element update on August 22, 1989.

- b. **City Financial Participation<sup>2</sup>** - The City will participate when possible in financial partnership with developers of affordable housing development projects meeting Income I and II housing needs. Because of limited resources, priority for participation will go to development projects with over 20% Income I and Income II units. The City's participation may include, among others, the following options:

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<sup>2</sup>Bold type face programs represent new Housing Element programs.

1) City Funds Leverage - Staff will investigate the feasibility of leveraging existing and future banking relationships to obtain lender commitments to finance Income I, II, and III housing projects. The City will also pursue methods to implement the Federal Community Reinvestment Act in Irvine. City staff has completed an initial study of financial institutions in Irvine and their current activities to fulfill the Community Reinvestment Act. New partnerships could be initiated by the City or non-profit organizations needing financial institution involvement.

2) Bond Issuance - The City will pursue issuing additional tax-exempt mortgage revenue bonds when feasible under State and Federal law guidelines. Bonds can currently be issued by the City, County or non-profit organizations for single-family and multi-family housing. Federal law requires that bond issues finance at least 20% units for households earning under 50% of the County median income for fifteen years. Tax-exempt bonds can also be issued for the purpose of refinancing units, which could be initiated for the existing County and City bond financed apartment units prior to the expiration of the ten-year term of affordability for the Income II and III units.

3) Housing Agency - Staff will investigate the feasibility of forming a City Housing Agency authorized under State Housing Authority law for the purpose of encouraging the new construction of Income I and II housing. This body could also be the agency of the City to coordinate financial mechanisms to fund low and for housing construction. Housing authorities have authority under California State law to issue bonds, to construct housing and to receive administrative monies to allocate HUD Section 8 vouchers and certificates to qualified seniors, disabled persons and families.

4) Housing Trust Fund - Staff will develop guidelines for the creation and expenditure of a City Housing Trust Fund to be used to develop new housing opportunities for Income I and II households. Sources for this fund primarily come from linkage fees as discussed in Objective C-7b.

5) Tax Credits - Staff will promote the review of Federal and State tax credit benefits by developers when evaluating projects meeting affordable housing requirements. Tax credits are available if 20% of the units in a project are for households earning under 50% of the HUD County Median Income, or 40% of the units are for households making under 60% of the HUD County Median Income.

6) Other Revenues - Staff will investigate the feasibility of farmworker housing grants, using hotel taxes or resale fees to increase revenues for housing development.



Result: In the past, the City, in conjunction with The Irvine Company, has developed a multi-family mortgage revenue bond program for the development of 1,400 rental units, with 20% Income III and 10% Income II units. Developers have also successfully utilized the County bond program to develop multi-family affordable dwelling units and to finance single family affordable units. Irvine will continue to assist developers in financing housing that produces a balance of housing. The City and other entities could potentially finance 4,000 rental units in five years.

Cost/Sources of Financing: The staff costs to develop and administer a bond program are paid out of the bond program proceeds. The staff time to complete the Housing Authority feasibility study, the Housing Trust Fund guidelines, and the City Leveraging study will be funded by the City utilizing general fund revenues.

Responsible Agencies: Community Development Department  
Administrative Services  
City Council  
Orange County, County Administrative Office

Schedule: The studies and guidelines will be completed by Winter 1990.

- c. *Land Trust* - A trust program will be developed to enable acquisition of land, or dedication of units for the purpose of creating affordable units with long-term affordability. The City could then offer land, units, or funds to Income I and II housing providers, with the assurance of a minimum 30 year affordability to affordability in perpetuity. City staff will evaluate the feasibility of purchasing rental housing, or having units or land dedicated by land owners, or fees established to satisfy affordability objectives.

Result: The City will assist in the provision of long-term Income I and II housing by having sites made available.

Cost/Sources of Financing: Development of this program will be conducted by the Community Development staff and paid through Community Development Block Grant administrative funds. Community Development Block Grant funds or Housing Trust funds can be used for purchase of land.

Responsible Agencies: Community Development Department  
City Council

Schedule: The study to initiate a land trust will occur by Winter 1990.



- d. *Non-Profit Organizations* - Support the efforts of non-profit organizations and citizen groups to facilitate the provision of low-cost housing. The City will principally accomplish this by developing a new non-profit development corporation or expand an existing corporation to focus on the construction of Income I and II family housing. The City will offer at least \$75,000 a year for three years to enable 1.5 to 2 people to staff this non-profit corporation. The City will make at least \$200,000 available to a viable family development in the first two years.

The Board of the non-profit will have up to eleven members: five appointees from the City Council, one Planning Commissioner, a building trade representative, a residential developer, a household member from an Income I or II household, and two other members representing employers, employees, financial, realty, educational or religious institutions.

Result: Non-profit organizations are eligible to apply for federal and state housing funds, and can issue tax-exempt bonds enabling them to construct low-cost housing. They may also provide services related to the City's housing program such as screening potential buyers of lower cost units. Encouragement of such activities will expand the scope of Irvine's housing program beyond what is possible with City staff alone.

Cost/Sources of Financing: Staff assistance could be in the form of loans, grants, or technical assistance. The cost would be paid from general fund revenue or, in part, from the City's CDBG funds or other grants. The City Council will review requests for assistance and determine which are appropriate.

Responsible Agencies:      Community Development Department  
                                 Community Services Department  
                                 City Council

Schedule: Funding for the non-profit corporation will begin in FY89-90. Staff will report to the City Council in Fall, 1989 on formation of a non-profit corporation.

- e. *Incentives* - Incentives may be offered to developers who are willing to provide affordable housing. A minimum of 30-year affordability must be provided to receive any incentives. Priority for incentives will be determined as a part of the development of this program and could include; higher affordability objectives, longer terms of affordability or a greater number of affordable housing units being provided. Any developer who receives approval to use any incentive listed below will be required to implement program guidelines listed under Objective C-6. The incentives may include the following:

- Bond Issues - The City can issue tax-exempt mortgage revenue bonds for new construction of rental units. At least 20% of the units must be available to households earning less than 50% of the median income.
- Density Bonuses: As required by existing state law, the City will permit applicants of housing developments which provide at least 25% Income I, II, III, and IV units, and units for households from 100-120% of the median income, or 10 percent of the total units of a housing development for lower-income households, as defined in Section 50079.5 of the Health and Safety Code, or 50 percent of the total dwelling units of a housing development for qualifying residents, as defined in Section 51.2 of the Civil Code, a higher density or other incentives. However, the overall number of units built in the village in which the site is located cannot exceed the carrying capacity of the village. The City may choose not to grant other incentives if a density bonus is granted. A longer term of affordability may also apply. The City will establish a processing procedure for developers seeking density bonuses.
- Transfer of Development Rights: In the Irvine Business Complex, incentives are currently available for residential projects to transfer development rights to produce commercial, office or industrial on another site. The City will explore this as an incentive in other villages.
- Priority Processing: The City will consider minimizing processing time for residential developments which provide Income I and II housing units.
- Reduction of Fees: The City will consider reducing or waiving processing and code compliance fees for developments which provide Income I and II units.

The City staff will modify the Parking Ordinance, the Park and Recreation Element, and the City Subdivision Ordinance (formally known as the Park Code) to focus incentives on developments with the greatest benefit to the City.

Result: Processing and development costs may be reduced so construction of Income I and Income II units is more viable.

Cost/Sources of Financing: The only incentive which may involve a direct cost to the City is reduction or waiver of fees. Indirect costs may occur through more intensive use of public parks, streets for parking, and loss of park land due to reduced dedication requirements. Staff time will be necessary to evaluate the incentives program, revise ordinances and develop a final incentives package for the purpose of increasing the amount of affordable units. Requests for



incentives would be considered during the development review process.

Responsible Agencies:      Community Development Department  
                                 Community Services Commission  
                                 Planning Commission  
                                 City Council

Schedule:    The Incentive Program will be revised by staff by Fall 1989.

- f.    **Resources Development** - The City will encourage developers to utilize resources and programs available through Federal, State, or local housing programs to assist in implementation of the Comprehensive Housing Program. The City will continue to participate in the Federal Community Development Block Grant (CDBG) program.

Result:    The CDBG program provides funds which can be used to lower the cost of new construction of units through acquiring land, and used to finance non-profit development corporations. Participating in this program enables Irvine to obtain scarce federal resources for local housing activities and provides a means for implementing its overall housing program. Irvine has participated in other federal, state and local housing programs and has approved projects using a variety of funding sources. Further encouragement for local developers could be provided through seminars on these programs and offering technical assistance in preparing applications.

Cost/Sources of Financing:    Up to 20 percent of Irvine's CDBG grant can be used to pay administrative and planning costs. These costs include staff salaries, preparation of applications, performance reports and contracts implementing specific projects. Efforts to assist developers to use Federal and State housing programs occur as part of normal development processing. Increasing these efforts as outlined above would require greater staff expertise. It may require adding staff positions, depending on the level of service offered. This cost could be paid from general fund revenues and/or CDBG money.

Responsible Agencies:      Community Development Department  
                                 Administrative Services Department  
                                 City Council

Schedule:    Ongoing

- g.    **Developer Process** - Staff will establish a procedure to evaluate projects to meet affordable housing goals. Staff will discuss City affordable housing goals in the preliminary meeting with the applicant and make staff recommendations to



the Planning Commission as part of the overall staff report. In the case of an individual project requiring re-zoning or other discretionary approval the developer will be made aware of affordable housing requirements to meet the Housing Element Goals and Objectives. City staff will develop an information sheet describing what the City's affordable housing goals are and the proper personnel to contact for information.

Result: The City will be able to reduce processing cost for developers by having a clearly communicated policy.

Cost/Sources of Financing: The cost of preparing the program description will be paid by general fund revenues. The staff will conduct the affordable housing evaluation as a part of the development processing.

Responsible Agency: Community Development Department

Schedule: The Affordable Housing Needs Program description will be completed by the end of Fall 1989.

- h. Expedited Hearing Process - The City will establish a process for residential development applications (CUP's, Master Plans, Subdivisions) to encourage initiation of public hearings within 6 months of submittal of a complete application. Major applications including General Plan Amendments, village-wide zoning or concept plans requiring extensive analysis will not be subject to this requirement, but will nevertheless, be processed expeditiously with a goal of initiating public hearings within 12 months.

Result: The City will be able to assure the residential development community of a public hearing on their application within 6 months.

Cost/Source of Financing: The cost of preparing the program will come from general fund revenues.

Responsible Agency: Community Development Department

Schedule: This process will be developed in more detail by the end of Fall 1989.

- i. **Blue Ribbon Committee** - Increase local resources and expand broad-based community and business support of new construction of affordable housing to augment State and Federal resources by establishing a Blue Ribbon Committee. The Committee would provide recommendations on the establishment of a mechanism to administer and disburse the local Housing Trust Fund.

The Blue Ribbon (Linkage Fee) Committee will be composed of representatives of one residential land owner, one residential

builder, one commercial developer and two appointees from each of the City Council members, totalling thirteen members.

Result: Broadened community and financial support to achieve desired objectives to provide Income I and II housing units for longer terms.

Cost/Sources of Financing: Significant City staff support will be required to support this activity. Cost would be paid from City general fund.

Responsible Agencies:      Community Development Department  
                                 Administrative Services Department  
                                 Planning Commission  
                                 City Attorney  
                                 City Council

Schedule: Program recommendations will be developed for City Council review by Spring 1990.

## OBJECTIVE C-2

Maintain quality design, siting, construction and maintenance while minimizing housing cost.

### Implementing Actions:

- a. Building Code Compliance<sup>3</sup> - The Uniform Building Code (UBC) will continue to be the basis for the standard of construction required in residential developments in Irvine.

Result: Residential construction will be of sufficient quality to insure adequate and safe housing for Irvine's residents.

Cost/Sources of Financing: The cost of ensuring compliance with the UBC includes the salaries of Irvine's plan checkers and inspectors, as well as certain administrative costs. This cost is being paid from the developer fees for these services.

Responsible Agencies: Community Development Department

Schedule: Ongoing

- b. Homeowner's Associations - Adequate common area maintenance in neighborhoods which have property held in common will be ensured through the use of homeowners and/or community associations or the formation of maintenance districts.

Result: One of the distinctive features of Irvine's neighborhoods is that they often include common open space and recreational facilities. Through this program, neighborhood quality will be maintained over time.

Cost/Sources of Financing: Developer fees have covered the initial costs to initiate homeowners and/or community associations. All continuing fees are paid by monthly assessment to homeowners by their associations. In areas without associations the City has developed maintenance districts to maintain common areas. The initiation costs were paid from general fund revenue with all future costs paid by homeowner assessments.

Responsible Agencies: Community Development Department  
Administrative Services Department

Schedule: Ongoing

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<sup>3</sup>Regular type face represents existing Housing Element programs.



- c. **Annual Review** - The City's processing system and development standards will be reviewed annually to consider changes which simplify these requirements or comply with new legislation. A listing of fees will be made available to all interested applicants.

Result: A review will be conducted annually. Past reviews have resulted in revising the Irvine zoning ordinance and streamlining the processing procedures.

Cost/Source of Financing: This analysis will involve expenses from staff salaries. Expenses will be paid from the general fund revenue.

Responsible Agencies:       Community Development Department  
                                  Administrative Services Department

Schedule: Annually, with the listing of fees provided by September 1989.

- d. **Site Compliance** - All residential developments will be analyzed to insure that the development's design meets City requirements and that adequate supportive services exist. During development review and code compliance staff evaluates the siting of structures, parking and access, parks and schools capacity, landscaping, signs, building design and supportive services (e.g. proximity to commercial development, child care sites, other service industries). The City conditions the tentative tract map or parcel map to comply with City requirements.

Result: The City will have a more consistent development quality according to City and State standards, and a reduction in trip distances because of adjacent commercial sites and other supportive services.

Cost/Sources of Financing: Staff cost for residential review will be paid through fees from developers.

Responsible Agency:       Community Development Department

Schedule: Ongoing

- e. **Housing Mix and Siting** - For each village, the City will require the preparation of a map which indicates the location and distribution of required affordable housing units. The map must be submitted in conjunction with the first tentative tract or master tentative tract map for the village.

In preparing the map, the applicant shall distribute affordable housing sites to prevent undue concentration of affordable housing in any one location. The affordable housing unit requirement will be a condition of the approval of the subdivi-

sion map. The landowner(s) of any one of the parcels shown on the map as a site for affordable housing shall inform any potential purchaser/developer that this site is to be used to fulfill the City's affordable housing requirements.

The City will not approve modification of the map if the modification will jeopardize fulfillment of any affordable housing requirement assigned to the area covered by the map. The landowner requesting the modification must submit a revised copy of the map to the City. If as a result of this modification, a site which was designated for affordable housing is no longer designated for this purpose, the site may be sold without restriction. The modification must be requested in writing and approved by the Director of Community Development. There shall be a phasing plan, at the time of zoning, that to the extent possible, assures a proportionate ratio of the issuance of building permits from market-rate units to affordable units.

Result: The City will have a systematic way for distributing affordable housing requirements and a means of enforcement. The preparation of an implementation plan and the disclosure requirements will ensure preservation of the City's intent over time.

Cost/Sources of Financing: The cost of preparing the map will be paid by the developer. Costs associated with its review and implementation will be paid out of processing fees.

Responsible Agency: Community Development Department

Schedule: Ongoing

- f. Energy Element - Energy efficiency standards will be assured by the Energy Element. These are adequately addressed in each development during the tentative tract map and subdivision and building permit process.

Result: The City will reduce the long-term energy consumption for residences through processing review and fulfill State Title 24 requirements.

Cost/Sources of Financing: This action is a part of the ongoing development processing and will be funded through development processing fees.

Responsible Agencies: Community Development Department  
Planning Commission

Schedule: Ongoing

- g. **Design Competition** - The City will initiate a Design Competition by soliciting design proposals for an affordable housing development which receives City financial participation.

**Result:** The purpose of the competition will be to encourage residential design creativity, and to focus more wide-spaced attention on the successes of Irvine's Comprehensive Housing Program.

**Cost/Sources of Financing:** The event could be coordinated with the Orange County American Institute of Architects (AIA). Some minimal staff time might be necessary to coordinate the competition.

**Responsible Agency:** Community Development Department

**Schedule:** The competition would be scheduled by Fall of 1993.



OBJECTIVE C-3

Ensure open housing practices and accessibility to housing.

Implementing Actions:

- a. **Fair Housing Program** - The City will continue to provide a fair housing program designed to ensure open housing practices for all residents.

Result: The provision of fair housing counseling services and other activities are designed to further the fair housing objectives of Title VIII of the Civil Rights Act of 1968. The fair housing program will further the housing objective of promoting a greater choice of housing opportunities. This program is currently administered by contract with the Orange County Fair Housing Council.

Cost/Source of Financing: The annual cost to provide a fair housing program is an eligible Community Development Block Grant program administration expenditure.

Responsible Agencies:      Community Development Department  
Fair Housing Council of Orange County

Schedule: Ongoing

- b. **City Human Rights Ordinance** - The City Council has adopted a human rights ordinance which initiates a review process for cases of alleged discrimination. The City will contract with outside agencies with experience in consumer, employment, and housing discrimination to provide this service.

Result: Discrimination will be discouraged and remedies or mediation can be sought from these organizations.

Cost/Sources of Financing: Some minimal staff support might be needed to supplement the services of the contract agency. Contract services will be paid by general fund revenue.

Responsible Agencies:      County Human Relations Commission  
State Department of Fair Employment  
and Housing  
Fair Housing Council of Orange County  
City Attorney  
City Clerks Office  
City Council

Schedule: Ongoing

- c. **Affirmative Marketing** - The City will encourage affirmative marketing on all residential projects, and will require developers to advertise to under-represented minority groups to indicate the availability of housing units which meet affordable housing requirements.

Result: Developers will encourage accessibility to minorities by informing these minority populations of affordable housing availability in Irvine.

Cost/Source of Financing: The advertising cost will be minimal and will be paid by the developer. City staff will develop guidelines with the assistance of the Fair Housing Council.

Responsible Agency: Community Development Department

Schedule: Affirmative marketing guidelines will be developed by Winter 1990.

#### OBJECTIVE C-4

Encourage a variety of housing types for all economic segments and for special housing populations.

##### Implementing Actions:

- a. *Special Needs Housing* - Congregate housing, cooperatives and senior housing with custodial and medical care (specifically Licensed Residential Care Facilities for the elderly such as Board and Cares and Skilled Nursing Facilities) will be encouraged in all villages, especially for Income I and II households. Congregate housing consists of separate living quarters and common cooking and dining facilities. Cooperatives are separate complete units with joint ownership. The City will conduct a study to investigate what incentives or measures are necessary to assure that these housing types are provided in each village and equal at least 5% of all new and/or existing units.

Result: This City policy will promote the construction of housing for special needs groups especially seniors, disabled, disabled or frail seniors and single parent families and especially for Income I and II households among these groups. Approximately 440 units could be available to these populations if these units are encouraged.

Cost/Sources of Financing: This study will be funded from the general fund revenue.

Responsible Agencies:      Community Development Department  
                                 Community Services Department  
                                 Planning Commission  
                                 City Council

Schedule: The completion of the study will occur by the end of Spring 1990.

- b. *Innovative Building Techniques* - The use of innovative building techniques or types will be encouraged to increase the range of housing opportunities available in Irvine for lower income households (e.g., use of prefabricated units).

Result: Further research will be completed on new building types or techniques other than modular units which are currently allowed in Irvine. This research will be done by staff from the Community Development Department. Staff would report to the City Council on their findings and give recommendations as to changes needed in ordinances and development standards to allow use of innovative building methods.



Cost/Sources of Financing: The cost for staff time would be paid from the general fund revenue.

Responsible Agencies: Community Development Department

Schedules: The study would be completed by the end of Winter 1991.

- c. **Accessible Housing.** - The City will require builders of ownership units in projects with 20 or more units to make available as an at-cost option, accessibility and adaptability features outlined in the State Housing and Community Development (HCD) Rental Guidelines and Title 24. Not more than 5 percent of the project's dwelling units and at least 25 percent of the dwelling units in each project shall have an alternate accessible design to allow for potential installation of these optional accessibility and adaptability features.

The City will also require builders of multi-family rental housing to comply with the State HCD Rental Guidelines and Title 24.

Result: In five years up to 440 adapted units will exist in Irvine that could be rented or owned by households having physically disabled persons.

Cost/Sources of Financing: The cost of adapting the ownership units will be paid by the buyer. Some staff compliance costs will be paid from the general fund.

Responsible Agencies: Community Development Department  
Community Services Department

Schedule: Compliance with this condition will be evaluated by the City at the time of project processing.

- d. **Student and Military Housing Need** - The City will continue to encourage the two adjacent Marine bases and UCI to build low-cost housing to meet the growing needs of the student and military populations.

Result: This policy will continue to assure that the growth in these unique and very mobile populations is not a major burden on the City of Irvine housing stock. Approximately 1,000 units will be built in five years on UCI and Marine properties within City limits.

Cost/Sources of Financing: Minimal staff time will be required to liaison with UCI and the Marines. The staff time will be funded by the general fund revenue.

Responsible Agencies: Community Development Department  
City Council

Schedule: Ongoing

- e. **Transitional and Temporary Housing** - The City will continue to support efforts by local non-profits to expand the transitional and temporary housing units in the City to reach a goal of 100 beds in five years. Staff will continue to offer support to obtain grants. The City will develop an ordinance permitting group quarters or shelters within some commercial, industrial, and high density housing areas. Hotel participation will also be sought, to increase the number of hotel vouchers available.

Result: The City would fulfill State law obligations and make housing opportunities available for the homeless, with special attention given to shelter for homeless families. The City has already received, in partnership with Irvine Temporary Housing, the local provider, a \$430,000 Federal grant for approximately 25-30 beds for 5 years. This supplements two farmhouses renovated, and 5 existing apartments with up to 25 beds, totaling approximately 65 beds available for the coming year. The homeless ordinance would fulfill State obligations to make adequate sites available for the homeless.

Cost/Sources of Financing: City staff time would be paid by general fund money and when possible Community Development Block Grant funds. Grants and private donations would primarily fund the transitional and temporary housing. Irvine Temporary Housing is responsible for the administration of the transitional units.

Responsible Agencies: Community Development Department  
Planning Commission  
City Council  
Irvine Temporary Housing, Inc.

Schedule: The ordinance will be brought to public hearing for approval by Spring 1990.

- f. **Opportunity Housing** - The City will encourage developers of housing to provide at least 1% of all units to households making 30% and below of the HUD County median income (Income I). These units could be rented to Section 8 Certificate holders, as long as they meet the City income qualification (Section 8 recipients can earn 0-50% of County median income). The same City requirements for affordable housing monitoring would apply (see Objective C-6).

Result: This policy would encourage the provision of approximately 88 units being built in the next five years for a greater range of households, particularly households who are



dependent on very limited incomes such as the elderly and disabled.

**Cost/Sources of Financing:** The City will pursue sources of financing as listed in Objective 1(b) in partnership with developers. One source might be the City Housing Trust Fund. Some staff time will be required to implement this City policy.

**Responsible Agencies:** Community Development Department  
Planning Commission  
City Council

**Schedule:** The policy will be developed as a part of the Incentives Program or City Financial Partnership Program.

- g. **Large Family Housing** - The City will encourage three-bedroom and four-bedroom units by requiring that at least 10% of the affordable housing units in a village or housing development have three-bedroom and four-bedroom units (except as delineated in Objective C-1-a), and require that these units be rented to no fewer than three persons for the three-bedroom units and four persons for the four-bedroom units.

**Result:** The City will encourage the provision of approximately 88 affordable three-bedroom and four-bedroom units for larger families in the next five years.

**Cost/Sources of Financing:** Staff time will be very minimal and will be paid out of the general fund.

**Responsible Agencies:** Community Development Department  
Planning Commission

**Schedule:** This policy will be implemented as a part of the Affordable Housing Program.

- h. **Bedroom Size and Unit Cost** - The City will require that all affordable housing units required in a project have at least the same proportion of one-bedroom, two-bedroom, three-bedroom, and four-bedroom floor plans as conventional units. Staff will establish minimum square footage standards for affordable housing units. A maximum rental and owner cost will be established according to unit size for affordable housing units according to State law guidelines.

**Result:** This policy will assure that units meeting affordable housing requirements are not overly represented by studio units and one-bedroom units, and have the same mix of larger units and have a range of costs according to the size of the unit.

**Cost/Sources of Financing:** There is minimal staff time necessary to implement this policy. Staff will implement this



as a part of the Affordable Housing Needs Program and will be paid by general fund revenues.

Responsible Agencies:      Community Development Department

Schedule: Development of minimum square footage standards and rental and owner cost standards will occur prior to Fall 1989.

## OBJECTIVE C-5

Preserve and increase affordable opportunities in the existing housing stock.

### Implementing Actions:

a. Apartment Conversion - Staff will develop criteria for the review and action on requests to convert apartments into condominiums which take into consideration:

- The impact of the conversion on the City's supply of apartments and rental vacancy rate;
- The effect on the City's supply of Income I, II, III and IV housing;
- The length of notice given to tenants and the alternatives available to them;
- The design and condition of the units.

Currently many apartment projects have approved subdivision maps for condominium development.

Result: The City will assess the impact of conversions on its housing stock and establish City policy regarding conversions through an ordinance. Uniform criteria will be prepared so that landowners and developers are aware of the rules pertaining to conversions prior to submitting requests.

Cost/Sources of Financing: The Community Development Department staff will be responsible for developing the ordinance and the City Council will establish the final policy. All costs would be paid from the general fund revenue. Enforcement would be through the normal subdivision process, funded by developer fees.

Responsible Agencies: Community Development Department  
City Council

Schedule: The conversion ordinance will be completed by Winter 1992.

b. Rental Subsidies - The City will aggressively pursue in the Section 8 Rental Assistance Program and investigate other potential Rental Subsidy Programs.

Result: A limited amount of rental assistance certificates and vouchers are available for use by tenants living in Irvine. This program is administered for Irvine by the Orange County Housing Authority (OCHA). Currently, 20 elderly and handicapped households and 59 family households are receiving Section 8 certificates and vouchers in Irvine. Irvine Temporary Housing and the City will receive an additional 45

certificates for graduates of the Transitional Housing Program for the next five years. By coordinating with OCHA, the City can participate in the Section 8 program. City staff will also provide assistance to non-profit corporations in obtaining Federal Emergency Management Agency (FEMA) funds for first month's rent. City staff will investigate other potential programs and funding sources for a supplemental rental subsidy program for the City of Irvine.

Cost/Sources of Financing: All of the costs associated with this program are paid by the Federal Government.

Responsible Agencies: Orange County Housing Authority  
Community Development Department  
City Council

Schedule: The rental subsidy program will be developed for City Council review by Winter 1990.

- c. Housing Organizations - The City will maintain membership in the Orange County Housing Authority Advisory Committee and other County housing organizations.

Result: The City will have a voice in the policies and programs undertaken by County organizations. For instance, the Housing Authority provides funding for housing activities such as the Section 8 Rental Assistance Program and long-term mortgage financing for the construction of housing for Income I and II households.

Cost/Source of Financing: The Housing Authority has no membership fee. The only cost involved is staff time for interagency coordination and participation in advisory committee meetings. Staff has been assigned from the Community Development Department for this purpose and their salaries are paid from general fund revenue.

Responsible Agencies: Community Development Department  
City Council

Schedule: Ongoing

- d. Long-Term Affordability - For all affordable housing units required, a minimum of thirty-year affordability will be required. Long-term affordability for ownership units will be maintained through a deed restriction. Each resale will be monitored by a City Housing Agency or an approved monitoring agent, to assure that qualified buyers are found, and that the increased price of the unit is consistent with a chosen index during the same time period. The deed document will state that the City has the first option to purchase the unit upon resale. Units must also remain owner-occupied.



Result: The program will prevent windfall profits to the first homeowner and will assure that housing opportunities are maintained for a minimum of thirty years. If someone chooses to sell an affordable housing unit, the City will assure that the unit is made available to a new qualified owner.

Cost/Sources of Financing: The resale program will be structured to accommodate thorough monitoring. One additional staff person may be necessary for monitoring purposes. General revenue funds would probably be necessary.

Responsible Agencies: Community Development Department  
City Council

Schedule: The program guidelines will be developed by Spring 1990.

- e. **Affordable Housing Brochure** - The City will continue to offer an informational brochure on the available affordable housing opportunities and update it yearly.

Result: Residents will be more aware of housing opportunities and less staff time will be devoted to questions that can be answered by the brochure.

Cost/Sources of Financing: The brochure will continue to be funded through the general fund.

Responsible Agency: Community Development Department

Schedule: Yearly

- f. **Second Units** - The City will encourage second units, as outlined in State law, in medium density and low density residential areas by encouraging an insert on the City's second unit ordinance in the CC&R's of each new development. Staff will also review the existing ordinance to identify any problems in its implementation.

Result: There will be consistent City policy regarding second units and all homeowners associations will be aware of State law.

Cost/Sources of Financing: Staff time will be paid from the general fund revenue.

Responsible Agency: Community Development Department

Schedule: The staff review will occur prior to the end of Summer 1991.

- g. **Historical Homes** - There are a few vacant historical farmhouses located in the City and the Sphere of Influence that The Irvine Company owns which could be preserved and used for housing. The City will continue to encourage non-profit organizations such as the Irvine Historical Society and Irvine Temporary Housing to preserve and utilize these homes. Two farmhouses have already been donated by The Irvine Company to be used for transitional housing by Irvine Temporary Housing.

Result: The City will continue to encourage the conservation of its few historical homes.

Cost/Sources of Financing: There will be no cost to the City, except if staff resources are committed. The City will continue to assist in searching for potential funding resources.

Responsible Agencies: Community Development Department  
Irvine Temporary Housing, Inc.

Schedule: Ongoing

- h. **Residential Code Awareness Inspection Program** - The City has investigated the feasibility and cost of performing inspections on each residential unit at resale for code compliance. This is one method of preserving housing stock and assuring City code compliance. This will be a voluntary program at this time and include both rental projects and ownership units.

Result: The City will have a higher quality housing stock over the long-term.

Cost/Sources of Financing: The inspection cost per unit is estimated to be \$132 per ownership unit. The inspection fee will pay for all costs of staff time.

Responsible Agency: Community Development Department

Schedule: The program will be further refined by a City task force during Winter 1990.

- i. **Conservation of Affordable Units** - The City will pursue the following actions to enable Income I, II and III units to remain affordable after the City requirements, Federal requirements and/or other terms of affordability expire.

1. The City shall conduct technical analysis regarding affordable units, on a project-by-project basis, to: maintain inventory of expiration dates of affordable units as part of the Affordable Housing Inventory (Objective C-6(d); evaluate legal framework and terms of affordability restrictions; evaluate financial feasibility of extending affordability versus new construction of new affordable



units; identify methods to preserve affordability and/or create replacement units (e.g., conversion of existing market rate units or allowing partial fulfillment of new construction objectives for affordable housing for renewal of affordability in existing affordable units); evaluate methods and feasibility of periodically recertifying tenants' incomes in order to ensure that the assisted affordable units serve the targeted income groups; identify and evaluate factors that influence an owner's decision regarding extension and termination of affordability restrictions.

2. The City shall work with property owners, non-profit organizations and tenants to explore and facilitate the extension of affordability terms, acquisition of the affordable units by tenants or an entity interested in maintaining affordability, and/or new construction of replacement affordable units. Non-profit organizations potentially available to assist in this effort include the Orange County Community Housing Corporation, Irvine Housing Opportunities, and Jamboree Housing Corporation.
3. Where feasible, the City will make available federal, state and local resources, such as Community Development Block Grant funds and refunding of bond issues, for the conservation of affordable units. Preservation of Income II units is the City's first priority, with preservation of Income III and Income IV units the second and third priorities. The City's objective is to allocate at least \$50,000 from these funding sources for the preservation of units at risk of conversion through 1994.
4. The City shall seek Federal, State and local resources for the conservation of affordable units, such as: Orange County Housing Authority Operating Reserve funds; Mortgage Credit Certificates for homebuyer assistance; loans from conventional lenders, assisted through programs of the Federal home Loan Bank and/or the Orange County Affordable Housing Clearinghouse; in-lieu fees collected by the City from residential developers.

Result: The City, if successful in finding resources such as bond financing to maintain affordability, will preserve potentially 1,049 Income I, II, III and IV housing units over the next ten years. The City is setting an objective to conserve the 60 Income III units at risk of conversion in 1994 within the next five years.

Cost/Sources of Financing: The financing mechanism or funding resources obtained from outside the City to preserve affordable units, on a project-by-project basis, will be the preferable method of funding staff. Initially,



the "special housing fund" from bond proceeds may be utilized for staff time and as a resource for refinancing purposes. This fund was established through the initial City Development Agreement and is 1/8 of 1% of the bond proceeds.

Responsible Agency:           Community Development Department  
                                  Administrative Services Department

Schedule:   Ongoing

## OBJECTIVE C-6

Insure that the Comprehensive Housing Program is monitored for performance and that beneficiaries meet program requirements.

### Implementing Actions:

- a. **Applicant Screening** - The City will require that developers who must fulfill City affordable housing requirements contract either with the City or with an organization approved by the City, such as Irvine Housing Opportunities, to screen potential tenants or buyers. A lottery will be held for all affordable units required, unless it can be shown that there is not enough demand to rent or sell these units. Developers must submit a notarized letter stating which organization they intend to use and a letter confirming the arrangements from the organization at least one month prior to the lottery. The screening process shall insure that the initial tenants or buyers of inclusionary units or affordable housing units are within the income group specified by the requirement.

**Result:** This requirement will insure that the intent of the City's affordable housing needs program is fulfilled.

**Cost/Source of Financing:** The cost of the screening process shall be paid by the developer.

**Responsible Agencies:** Community Development Department  
Designated Screening Agencies

**Schedule:** Ongoing

- b. **Income Measurements** - The City will utilize the Orange County median family income, as published by the Department of Housing and Urban Development, for all inclusionary and affordable housing requirements. The City will utilize household income criteria by household size for income qualification when this is available. As an example, under household size qualification a single person household would need to have a lower income to qualify than a four-person family. Income includes salaries, wages, interest from assets, tips, pensions, etc., from all members of the household.

**Result:** This will result in consistent qualifications for household income, allow City monitoring to be less complex and more consistent with other Federal and State programs.

**Cost/Sources of Financing:** Minimal staff time is associated with this policy implementation and will be paid out of the general fund revenue.

**Responsible Agency:** Community Development Department

Schedule: Ongoing

c. *Priorities* - The developers of required affordable housing units must utilize the following list of priorities established by City Council Resolution in distributing affordable housing units required by the City. These priorities are:

- First Priority: households with a member who has permanent full-time employment in Irvine City limits, or a Section 8 certificate or voucher (in the case of rental units).
- Second Priority: households from the general public.

Eligibility for the First Priority shall be determined by the City of Irvine or its approved screening agency. Regardless of these priorities, households must first establish their eligibility for Irvine's affordable housing program based on income.

Result: This requirement will insure that Irvine addresses the housing need of persons working within the City, in addition to the general public. This prioritization also encourages shorter work to home commutes, and reduces negative environmental effects.

Cost/Sources of Financing: Costs will be paid through fees to the screening agent by the developer of the units.

Responsible Agencies: Community Development Department  
Designated Screening Agencies

Schedule: Ongoing

d. **City Affordable Housing Inventory** - The City will update its affordable housing inventory on a semi-annual basis for Planning Commission and City Council review. The Inventory will identify the total number of housing units provided and the number of affordable housing units within that total. The Inventory will also identify the City's share of the RHNA and how these totals contribute to meeting the City's RHNA objectives. The Inventory shall be a part of the City's Development Monitoring Program, identified in the Land Use Element, Objective A-1. In particular, the Inventory shall be a part of the regular report to the City Council on progress in implementing the General Plan (Implementing Action a of Objective A-1), which report shall also be submitted to the California Department of Housing and Community Development within thirty days after receipt by the City Council.

Result: An update will allow a six-month assessment of the housing production under the Comprehensive Housing Program, as



well as the City's progress in satisfying its share of the RHNA.

Cost/Sources of Financing: City staff time will be paid by general funds revenue.

Responsible Agency: Community Development Department

Schedule: Semi-annual

- e. **Centralized Application System** - City staff will work with the development community to establish a centralized application process for all affordable housing, inclusionary, and lawsuit settlement units in the City of Irvine. The system will have one office and phone number that will be used by potential renters. In establishing the new system, the existing applications and waiting lists will be coordinated into one master list. City staff will evaluate the possibility of prioritizing households that pay more than 30% of their income on housing.

Result: Applicants will be assisted in a more orderly way, and the City will be more assured of consistent information being given to the public.

Cost/Source of Financing: Staff may need to assist in reviewing proposals by The Irvine Company. The centralized system may reduce some management company costs.

Responsible Agency: Community Development Department

Schedule: Staff will produce a program for City Council review by Fall 1989.

OBJECTIVE C-7

Encourage a balance of housing to jobs, and encourage mixed-use development.

Implementing Actions:

- a. **Employee Survey** - The City will perform a survey of Irvine employees to find up-to-date information on the type of housing needed, and the household size and income. This survey would be performed every two years by the City.

Result: The City would have current data to evaluate existing employee housing need.

Cost/Sources of Financing: The cost has been estimated to be approximately \$15,000 to \$20,000 and could be completed in coordination with other departments and commissions needing information about City employee's needs, such as child care functions or park needs. The financing could be obtained from the general fund revenue and in part from development fees. A consultant would be obtained to assist in developing the survey instrument.

Responsible Agencies:      Community Development Department  
                                 Community Services Department  
                                 Administrative Services Department  
                                 Labor Force Committee  
                                 City Council

Schedule: The survey would be performed by December 1989 and bi-annually thereafter.

- b. **Linkage Fee** - The City will investigate the adoption of an ordinance linking employment generation to the production of Income I and II housing development. A required amount of Income I and II housing to be built, or an in-lieu fee (by type of development and amount of employment generation) may be required. This housing or these in-lieu fees can be used to help mitigate environmental impacts from new employment generation.

An In-Lieu Fee will be deposited in a City Housing Trust Fund prior to the issuance of a Certificate of Use and Occupancy for the development. The Fund will have the sole purpose of creating new housing opportunities for Income I and II households. No less than 40% of the In-Lieu Funds will be used for the new construction of Income I and II housing. Eligible expenses include land banking, land-write-down, on-site costs, down payment loans, and school fees, etc. These funds will be loaned or granted. A priority of funds distribution will be established according to City objectives. The Director of

Community Development will make the final determination as to which projects receive funds. Up to 10% of the fund may be used for program administration costs.

Result: A better balance of housing production to employment production will be accomplished.

Cost/Sources of Financing: The development of the ordinance will be funded by general fund revenues or linkage fees. The implementation will be financed through development processing fees or the linkage fee.

Responsible Agencies:      Community Development Department  
                                 Administrative Services Department  
                                 City Council  
                                 Ad Hoc Blue Ribbon Committee

Schedule: The development of the ordinance will be completed by Summer 1990. Staff will report to the City Council on the program progress by Winter 1989.

- c. **Jobs/Housing Balance** - In order to better balance jobs to housing, the City in planning areas without zoning and/or concept plan approvals, will encourage that at the time of zoning and concept plan approval, the maximum allowable General Plan designations for that planning area be built. In addition, the City will encourage a balance of housing in each planning area by meeting the City's Regional Housing Needs Assessment according to income categories.

Result: The City will encourage the maximum number of units under the General Plan and assure a better jobs/housing balance.

Costs/Sources of Financing: Staff time required to implement this program will be paid through development fees and the general fund.

Responsible Agencies:      Community Development  
                                 Planning Commission  
                                 City Council

Schedule: This program will be implemented at the zoning or concept plan stage for each village or planning area.

### Standards

1. Income I is defined as households earning 0-30% of the County median income, Income II is defined as households earning less than 50% of the County median income, Income III is defined as households earning 50-80% of the County median income and



Income IV is households earning 80-120% of the County median income.

2. The City establishes minimum affordable housing goals for all new dwelling units for the following income categories:
  - 1% for households earning 0 to 30% of the HUD County median income (Income I);
  - 11.5% for households earning less than 50% of the HUD County median income (Income II); and
  - 12.5% for households earning between 50 to 80% of the HUD County median income (Income III).
3. All affordable housing units shall be affordable to the required income ranges for at least thirty (30) years.
4. At least 10 percent of the affordable housing units shall be three (3) and four (4) bedroom units subject to the in-fill exception set forth in Implementing Action C-1-a.
5. At least ten (10) percent of the affordable housing units shall be accessible to the physically handicapped according to state guidelines.
6. All units meeting inclusionary requirements or affordable housing goals will utilize the latest published Orange County HUD median income.
7. All residential development approvals must be consistent with the General Plan.

### Related Objective Numbers

Land Use Element - A-1, A-2, A-3, A-4, A-7

Urban Design Element - B-2, B-3, B-4

Circulation Element - D-2, D-3, D-4, D-6, D-7

Noise Element - F-1, F-2, F-3

Energy Element - I-1

Safety Element - J-1, J-2

Parks and Recreation Element - K-1, K-2

Conservation and Open Space Element - L-1, L-3, L-4

Seismic Element - M-1, M-2

Cultural Resources - N-1

### Compliance Regulations

State Housing Element Legislation

Uniform Building Code

City of Irvine Building Regulations

City of Irvine Zoning Ordinance

City of Irvine Subdivision Ordinance

City of Irvine Human Rights Ordinance

City Council Resolution \_\_\_\_: Priority for Distribution of  
Income I, II, III and IV Units

City Council Resolution \_\_\_\_: Pricing of Income I, II, III  
and IV Units

**FIGURE C-1**

**GENERAL PLAN POTENTIAL RESIDENTIAL DEVELOPMENT**

<u>PLANNING AUTHORITY</u>	<u>LAND USE CATEGORY</u>	(1) <u>DENSITY RANGE</u>	(2) <u># OF ACRES</u>	(3) <u>LOW # OF UNITS</u>	(3) <u>HIGH # OF UNITS</u>
<b>CITY</b> (Existing Boundary)	<b>RESIDENTIAL Estate</b>	(.1-1 Du/Ac)	0	0	0
	Low	(1-5 Du/Ac)	1,862	1,648	7,998
	Medium	(5-10 Du/Ac)	5,942	15,991	31,743
	Med High	(10-25 Du/Ac)	2,711	15,409	33,794
	High	(25-40 Du/Ac)	202	1,639	2,564
(4)	<b>MULTI-USE</b>	(25-40 Du/Ac)	89	562	1,858
(4)	<b>GEN INSTIT</b>	(25-40 Du/Ac)	10	231	370
(4)	<b>B&amp;I</b>	(25-40 Du/Ac)	90	0	3,896
	<b>SUBTOTAL:</b>		10,906	35,480	82,223
<b>CITY/ COUNTY</b> (Sphere of Influence)	<b>RESIDENTIAL Estate</b>	(.1-1 Du/Ac)	3,379	0	853
	Low	(1-5 Du/Ac)	1,377	276	7,501
	Medium	(5-10 Du/Ac)	716	2,565	5,131
	Med High	(10-25 Du/Ac)	150	858	2,146
	High	(25-40 Du/Ac)	50	855	1,368
(4)	<b>MULTI-USE</b>	(25-40 Du/Ac)	0	0	0
(4)	<b>GEN INSTIT</b>	(25-40 Du/Ac)	0	0	0
(4)	<b>B&amp;I</b>	(25-40 Du/Ac)	0	0	0
	<b>SUBTOTAL:</b>		5,672	4,554	16,999
	<b>TOTAL:</b>		16,578	40,034	99,222
(6)	<b>INSTITUTIONAL</b>				
	Apartment	N/A	100	0	2,850
	Dorms	N/A	205	0	5,760
	Faculty Housing	N/A	233	0	810
	Mobile Home	N/A	10	0	80
	<b>SUBTOTAL:</b>		548	0	9,500
(7)	<b>MILITARY</b>	(5-10 Du/Ac)			
	<b>SUBTOTAL</b>		418	3,252	6,505
	<b>PLANNING AREA TOTAL:</b>		17,544	43,286	115,227

**FOOTNOTES:**

1. The General Plan residential density ranges are based on a gross acre figure.
2. The acreage total by General Plan residential category is an estimate, which was derived from the Land Use Element map using a computerized planimeter. As such the acreage estimates reflect gross acre figures.
3. The dwelling unit range (low-high) is consistent with the anticipated General Plan Land Use Element Figure A-9 figures, which establish the overall permitted range of dwelling units per residential category. The actual dwelling unit range (low-high) may be less than that allowed by the available acreage within that category. These numbers are part of the anticipated criteria to be set forth in the Open Space General Plan Amendment 0016.
4. These designations provide for a variety of land uses, including residential which corresponds to the high density residential category, except where otherwise noted in the General Plan text. The acreage total devoted for residential purposes is a portion of the overall acreage.
5. Land use authority and related regulatory activities are controlled by the County of Orange. Residential categories, acreage and dwelling unit totals are based on the County of Irvine General Plan and do not reflect the County of Orange General Plan.
6. Land use authority and related regulatory activities are controlled by the University of California. Residential categories acreage and dwelling unit totals are based on the University's Long Range Development Plan.
7. Land use authority and related regulatory activities are controlled by the United States Department of Defense - Marine Corps. Residential category, acreage and dwelling unit totals are based on the Marine Corps - Community Plans and Liaison.



DENSITY UNIT RANGE BY  
GENERAL PLAN CATEGORY

PLANNING AUTHORITY GENERAL PLAN (1)	FIGURE A-10 DENSITY RANGE (DU/AC)								
	(2)(3) ESTATE	(2)(3) LOW	(2)(3) MEDIUM	(2)(3) MED.-HIGH	(2)(3) HIGH	(2)(3) MULTI-USE	(2)(3) INST	(2)(3) B & I	(2)(3) MILITARY
	1 - 1 DU/AC	1 - 5 DU/AC	5 - 10 DU/AC	10 - 25 DU/AC	25 - 40 DU/AC	25 - 40 DU/AC	25 - 40 DU/AC	25 - 40 DU/AC	5 - 10 DU/AC
1. City									
General Plan & Zoned Planning Area									
P.A. 8	0	327 to 1637	2365 to 4731	755 to 1888	280 to 449	0	0	0	0
(9) P.A. 10	0	0	1215 to 2430	350 to 1325	0	187 to 300	0	0	0
P.A. 11	0	0	2212 to 4516	936 to 3169	0	0	0	0	0
(4)(9) P.A. 12	0	0	300 to 600	2000 to 3712	350 to 500	250 to 350	0	0	0
P.A. 14	0	164 to 820	797 to 1565	1334 to 3275	0	0	0	0	0
P.A. 15	0	0	3568 to 8710	1180 to 2791	384 to 615	125 to 359	0	0	0
P.A. 19	0	0	0	1180 to 2835	0	0	0	0	0
P.A. 20	0	93 to 465	1230 to 2460	340 to 850	0	0	0	0	0
P.A. 21	0	738 to 3690	60 to 120	340 to 1005	0	0	86 to 138	0	0
P.A. 24	0	0	0	1155 to 2889	0	0	0	0	0
P.A. 36	0	0	0	0	0	0	0	0 to 3896	0
2. City/County									
General Plan Not Yet Zoned Planning Areas									
P.A. 1	0 to 247	154 to 4380	0	0	0	0	0	0	0
P.A. 2	0 to 165	122 to 3121	0	0	0	0	0	0	0
P.A. 4	0	0	1366 to 2733	66 to 167	625 to 1000	0	0	0	0
P.A. 5	0	226 to 853	505 to 670	890 to 1362	0	0	0	0	0
P.A. 6	0 to 441	0	0	0	0	0	0	0	0
P.A. 7	0	0	1199 to 2398	792 to 1979	230 to 368	0	0	0	0
P.A. 17	0	0	840 to 1680	140 to 350	0	0	0	0	0
P.A. 18	0	0	100 to 200	220 to 550	0	0	0	0	0
P.A. 22	0	0	1135 to 2270	420 to 1050	0	0	0	0	0
P.A. 23	0	0	0	0	625 to 1000	0	0	0	0
(4)(5) P.A. 26	0	0	210 to 420	632 to 1580	0	(3) 0 to 800	0	0	0
P.A. 27	0	48 to 250	487 to 975	510 to 1275	0	0	0	0	0
P.A. 38	0	0	782 to 896	1704 to 3374	0	0	0	0	626 to 1253
3. (6) UCI									
P.A. 50	0	0	0	0	0	0	0 to 9500	0	0
4. (7) MCAS									
EL TORO									
P.A. 51	0	0	0	0	0	0	0	0	2626 to 5252

EXHIBIT C-2  
Selling Unit Count by  
General Plan Category

PLANNING AUTHORITY GENERAL PLAN (1)	FIGURE A-10 DENSITY RANGE (DU/AC)								
	(2)(3) ESTATE	(2)(3) LOW	(2)(3) MEDIUM	(2)(3) MED.-HIGH	(2)(3) HIGH	(2)(3) MULTI-USE	(2)(3) INST	(2)(3) B & I	(2)(3) MILITARY
	1 - 1 DU/AC	1 - 5 DU/AC	5 - 10 DU/AC	10 - 25 DU/AC	25 - 40 DU/AC	25 - 40 DU/AC	25 - 40 DU/AC	25 - 40 DU/AC	5 - 10 DU/AC
1. City General Plan & Zoned Planning Area									
P.A. 8	0	1537	4014	1359	356	0	0	0	0
(9) P.A. 10	0	0	1701	255	0	0	0	0	0
P.A. 11	0	0	3210	2253	0	0	0	0	0
(4)(9) P.A. 12	0	0	0	1112	0	0	0	0	0
P.A. 14	0	758	261	572	0	0	0	0	0
P.A. 15	0	0	7998	370	462	0	0	0	0
P.A. 19	0	0	0	1735	0	0	0	0	0
P.A. 20	0	481	1863	395	0	0	0	0	0
P.A. 21	0	2476	0	447	0	0	138	0	0
P.A. 24	0	0	0	2355	0	0	0	0	0
P.A. 36	0	0	0	0	0	0	0	403	0
2. City/County General Plan Not Yet Zoned Planning Areas									
P.A. 1	0	0	0	0	0	0	0	0	0
P.A. 2	0	0	0	0	0	0	0	0	0
P.A. 4	0	0	0	0	0	0	0	0	0
P.A. 5	0	0	0	0	0	0	0	0	0
P.A. 6	0	0	0	0	0	0	0	0	0
P.A. 7	0	0	0	0	0	0	0	0	0
P.A. 17	0	0	0	0	0	0	0	0	0
P.A. 18	0	0	0	0	0	0	0	0	0
P.A. 22	0	0	0	0	0	0	0	0	0
P.A. 23	0	0	0	0	0	0	0	0	0
(4)(5) P.A. 26	0	0	0	0	0	0	0	0	0
P.A. 27	0	0	0	0	0	0	0	0	0
P.A. 38	0	0	0	0	0	0	0	0	0
3. (6) UCI									
P.A. 50	0	0	0	0	0	0	3395	0	0
4. (7) MCAS									
EL TORO									
P.A. 51	0	0	0	0	0	0	0	0	5252

REMAINING DWELLING UNIT POTENTIAL  
BY GENERAL PLAN CATEGORY

PLANNING AUTHORITY GENERAL PLAN (1)	FIGURE A-10 DENSITY RANGE (DU/AC)								
	(2)(3) ESTATE	(2)(3) LOW	(2)(3) MEDIUM	(2)(3) MED.-HIGH	(2)(3) HIGH	(2)(3) MULTI-USE	(2)(3) INST	(2)(3) B & I	(2)(3) MILITARY
	1 - 1 DU/AC	1 - 5 DU/AC	5 - 10 DU/AC	10 - 25 DU/AC	25 - 40 DU/AC	25 - 40 DU/AC	25 - 40 DU/AC	25 - 40 DU/AC	5 - 10 DU/AC
1. City									
General Plan & Zoned Planning Area									
P.A. 8	0	0 to 100	0 to 717	0 to 529	0 to 93	0	0	0	0
(9) P.A. 10	0	0	0 to 729	95 to 1070	0	187 to 300	0	0	0
P.A. 11	0	0	0 to 1306	0 to 916	0	0	0	0	0
(4)(9) P.A. 12	0	0	300 to 600	888 to 2600	350 to 500	250 to 350	0	0	0
P.A. 14	0	0 to 62	536 to 1304	762 to 2703	0	0	0	0	0
P.A. 15	0	0	0 to 712	716 to 2421	0 to 153	125 to 359	0	0	0
P.A. 19	0	0	0	0 to 1100	0	0	0	0	0
P.A. 20	0	-16*	0 to 597	0 to 455	0	0	0	0	0
P.A. 21	0	0 to 1214	60 to 120	0 to 558	0	0	0	0	0
P.A. 24	0	0	0	0 to 534	0	0	0	0	0
P.A. 36	0	0	0	0	0	0	0	0 to 3493	0
2. City/County									
General Plan									
Not Yet Zoned Planning Areas									
P.A. 1	0 to 247	154 to 4380	0	0	0	0	0	0	0
P.A. 2	0 to 165	122 to 3121	0	0	0	0	0	0	0
P.A. 4	0	0	1366 to 2733	66 to 167	625 to 1000	0	0	0	0
P.A. 5	0	226 to 853	505 to 670	890 to 1362	0	0	0	0	0
P.A. 6	0 to 441	0	0	0	0	0	0	0	0
P.A. 7	0	0	1199 to 2398	792 to 1979	230 to 368	0	0	0	0
P.A. 17	0	0	840 to 1680	140 to 350	0	0	0	0	0
P.A. 18	0	0	100 to 200	220 to 550	0	0	0	0	0
P.A. 22	0	0	1135 to 2270	420 to 1050	0	0	0	0	0
P.A. 23	0	0	0	0	625 to 1000	0	0	0	0
(4)(5) P.A. 26	0	0	210 to 420	632 to 1580	0	(3) 0 to 800	0	0	0
P.A. 27	0	48 to 250	487 to 975	510 to 1275	0	0	0	0	0
P.A. 38	0	0	782 to 896	1704 to 3374	0	0	0	0	626 to 1253
3. (6) UCI									
P.A. 50	0	0	0	0	0	0	0 to 6105	0	0
4. (7) MCAS									
EL TORO									
P.A. 51	0	0	0	0	0	0	0	0	0



UNIT RANGE BY  
ZONING CATEGORY

PLANNING AUTHORITY GENERAL PLAN <sup>(1)</sup>		(2)(3) ESTATE (11)(12)	(2)(3) LOW (11)(12)	(2)(3) MEDIUM (11)(12)	(2)(3) MEDIUM-HIGH (11)(12)	(2)(3) HIGH DENSITY (11)(12)	(2)(3) MULTI-USE (11)(12)	(2)(3) INST. (11)(12)	(2)(3) B & I (11)(12)	(2)(3) MILITARY (11)(12)			
ZONING ORDINANCE <sup>(10)</sup>		ESTATE .1 - 1.0 DU/NET AC	SUBURBAN 1.0 - 4.0 DU/NET AC	LOW 1.1 - 6.5 DU/NET AC	LOW-MEDIUM 6.6 - 12.5 DU/NET AC	WEST PARK 6.6 - 13.0 DU/NET AC	MEDIUM DENSITY 12.6 - 18.5 DU/NET AC	MEDIUM-HIGH 18.6 - 31.0 DU/NET AC	HIGH DENSITY 31.1 - 50.0 DU/NET AC	MIXED USE 25 - 40 DU/NET AC	INST. 25 - 40 DU/NET AC	B & I 30 - 45 DU/NET AC	MILITARY 5 - 10 DU/NET AC
<hr/>													
1. City													
General Plan & Zoned Planning Area													
	P.A. 8	0	0	1105 to 6529	690 to 1306	0	415 to 609	167 to 261	0	0	0	0	0
(9)	P.A. 10	0	0	279 to 1648	76 to 144	0	127 to 186	49 to 82	0	0	0	0	0
	P.A. 11	0	0	627 to 3705	652 to 1235	0	219 to 322	65 to 108	0	0	0	0	0
(4)(9)	P.A. 12	0	0	0	315 to 597	0	45 to 66	302 to 504	99 to 159	0	0	0	0
	P.A. 14	0	0	186 to 820	0	1295 to 1500	1654 to 1900	744 to 1240	0	125 to 200	0	0	0
	P.A. 15	0	0	566 to 3344	1957 to 3706	0	554 to 813	705 to 1770	0	289 to 821	0	0	0
	P.A. 19	0	0	0	423 to 803	0	511 to 750	139 to 232	0	0	0	0	0
	P.A. 20	0	0	436 to 2576	43 to 82	0	56 to 82	0	0	0	0	0	0
	P.A. 21	0	124 to 495	632 to 3736	47 to 90	0	61 to 90	54 to 90	0	0	86 to 138	0	0
	P.A. 24	0	0	0	162 to 306	0	464 to 682	818 to 1364	0	336 to 537	0	0	0
	P.A. 36	0	0	0	0	0	0	0	0	0	0	0	0
2. City/County													
General Plan Not Yet Zoned Planning Areas													
	P.A. 1	0	0	0	0	0	0	0	0	0	0	0	0
	P.A. 2	0	0	0	0	0	0	0	0	0	0	0	0
	P.A. 4	0	0	0	0	0	0	0	0	0	0	0	0
	P.A. 5	0	0	0	0	0	0	0	0	0	0	0	0
	P.A. 6	0	0	0	0	0	0	0	0	0	0	0	0
	P.A. 7	0	0	0	0	0	0	0	0	0	0	0	0
	P.A. 17	0	0	0	0	0	0	0	0	0	0	0	0
	P.A. 18	0	0	0	0	0	0	0	0	0	0	0	0
	P.A. 22	0	0	0	0	0	0	0	0	0	0	0	0
	P.A. 23	0	0	0	0	0	0	0	0	0	0	0	0
(4)(5)	P.A. 26	0	0	0	0	0	0	0	0	0	0	0	0
	P.A. 27	0	0	0	0	0	0	0	0	0	0	0	0
	P.A. 38	0	0	0	0	0	0	0	0	0	0	0	626 to 12
3. (6) UCI													
	P.A. 50	0	0	0	0	0	0	0	0	0	0 to 9500	0	0
4. (7) MCAS													
	EL TORO												
	P.A. 51	0	0	0	0	0	0	0	0	0	0	0	2626 to 52

EXISTING DWELLING UNIT COUNT BY  
ZONING CATEGORY

PLANNING AUTHORITY GENERAL PLAN <sup>(1)</sup>		(2)(3) ESTATE (1)(12)	(2)(3) LOW (1)(12)		(2)(3) MEDIUM (1)(12)		(2)(3) MEDIUM-HIGH (1)(12)		(2)(3) HIGH DENSITY (1)(12)	(2)(3) MULTI-USE (1)(12)	(2)(3) INST. (1)(12)	(2)(3) B & I (1)(12)	(2)(3) MIL (1)
ZONING ORDINANCE <sup>(10)</sup>		ESTATE .1 - 1.0 DU/NET AC	SUBURBAN 1.0 - 4.0 DU/NET AC	LOW 1.1 - 6.5 DU/NET AC	LOW-MEDIUM 6.6 - 12.5 DU/NET AC	WEST PARK 6.6 - 13.0 DU/NET AC	MEDIUM DENSITY 12.6 - 18.5 DU/NET AC	MEDIUM-HIGH 18.6 - 31.0 DU/NET AC	HIGH DENSITY 31.1 - 50.0 DU/NET AC	MIXED USE 25 - 40 DU/NET AC	INST. 25 - 40 DU/NET AC	B & I 30 - 45 DU/NET AC	MIL 5 DU/NET AC
1. City General Plan & Zoned Planning Area													
	P.A. 8	0	0	4142	1287	0	1583	614	0	0	0	0	
(9)	P.A. 10	0	0	1298	145	0	422	194	0	0	0	0	
	P.A. 11	0	0	3101	1240	0	218	344	0	0	0	0	
(4)(9)	P.A. 12	0	0	0	272	0	60	423	305	0	0	0	
	P.A. 14	0	0	298	0	968	1946	0	0	0	0	0	
	P.A. 15	0	0	2107	3475	0	998	1770	0	462	0	0	
	P.A. 19	0	0	0	381	0	880	388	0	0	0	0	
	P.A. 20	0	0	2435	98	0	42	0	0	0	0	0	
	P.A. 21	0	279	2551	300	0	253	0	0	0	138	0	
	P.A. 24	0	0	0	232	0	266	1202	0	537	0	0	
	P.A. 36	0	0	0	0	0	0	0	0	0	0	0	
2. City/County General Plan Not Yet Zoned Planning Areas													
	P.A. 1	0	0	0	0	0	0	0	0	0	0	0	
	P.A. 2	0	0	0	0	0	0	0	0	0	0	0	
	P.A. 4	0	0	0	0	0	0	0	0	0	0	0	
	P.A. 5	0	0	0	0	0	0	0	0	0	0	0	
	P.A. 6	0	0	0	0	0	0	0	0	0	0	0	
	P.A. 7	0	0	0	0	0	0	0	0	0	0	0	
	P.A. 17	0	0	0	0	0	0	0	0	0	0	0	
	P.A. 18	0	0	0	0	0	0	0	0	0	0	0	
	P.A. 22	0	0	0	0	0	0	0	0	0	0	0	
	P.A. 23	0	0	0	0	0	0	0	0	0	0	0	
(4)(5)	P.A. 26	0	0	0	0	0	0	0	0	0	0	0	
	P.A. 27	0	0	0	0	0	0	0	0	0	0	0	
	P.A. 38	0	0	0	0	0	0	0	0	0	0	0	
3. (6) UCI													
	P.A. 50	0	0	0	0	0	0	0	0	0	3395	0	
4. (7) MCAS													
	EL TORO												
	P.A. 51	0	0	0	0	0	0	0	0	0	0	0	52

GENERAL PLAN FIGURE C-2  
REMAINING ZONING UNIT POTENTIAL  
BY ZONING CATEGORY

PLANNING AUTHORITY GENERAL PLAN (1)	(2)(3) ESTATE (1)(12)	(2)(3) LOW (1)(12)	(2)(3) LOW (1)(12)	(2)(3) MEDIUM (1)(12)	(2)(3) MEDIUM (1)(12)	(2)(3) MEDIUM-HIGH (1)(12)	(2)(3) MEDIUM-HIGH (1)(12)	(2)(3) HIGH DENSITY (1)(12)	(2)(3) MULTI-USE (1)(12)	(2)(3) INST. (1)(12)	(2)(3) B & I (1)(12)	(2)(3) MILITARY (1)(12)
ZONING ORDINANCE (10)	ESTATE .1 - 1.0 DU/NET AC	SUBURBAN 1.0 - 4.0 DU/NET AC	LOW 1.1 - 6.5 DU/NET AC	LOW-MEDIUM 6.6 - 12.5 DU/NET AC	WEST PARK 6.6 - 13.0 DU/NET AC	MEDIUM DENSITY 12.6 - 18.5 DU/NET AC	MEDIUM-HIGH 18.6 - 31.0 DU/NET AC	HIGH DENSITY 31.1 - 50.0 DU/NET AC	MIXED USE 25 - 40 DU/NET AC	INST. 25 - 40 DU/NET AC	B & I 30 - 45 DU/NET AC	MILITARY 5 - 10 DU/NET AC
1. City General Plan & Zoned Planning Area												
P.A. 8	0	0	0 to 2387	0 to 19	0	-974*	-353*	0	0	0	0	0
(9) P.A. 10	0	0	0 to 350	-1*	0	-236*	-112*	0	0	0	0	0
P.A. 11	0	0	0 to 604	-5*	0	1 to 104	-236*	0	0	0	0	0
(4)(9) P.A. 12	0	0	0	43 to 325	0	0 to 6	0 to 81	-146*	0	0	0	0
P.A. 14	0	0	0 to 522	0	327 to 532	-46*	744 to 1240	0	125 to 200	0	0	0
P.A. 15	0	0	0 to 1237	0 to 231	0	-185*	0	0	0 to 359	0	0	0
P.A. 19	0	0	0	42 to 422	0	-130*	-156*	0	0	0	0	0
P.A. 20	0	0	0 to 141	-16*	0	14 to 40	0*	0	0	0	0	0
P.A. 21	0	0 to 216	0 to 1185	-210*	0	-163*	54 to 90	0	0	0	0	0
P.A. 24	0	0	0	0 to 74	0	198 to 416	0 to 162	0	0	0	0	0
P.A. 36	0	0	0	0	0	0	0	0	0	0	0	0
2. City/County General Plan Not Yet Zoned Planning Areas												
P.A. 1	0	0	0	0	0	0	0	0	0	0	0	0
P.A. 2	0	0	0	0	0	0	0	0	0	0	0	0
P.A. 4	0	0	0	0	0	0	0	0	0	0	0	0
P.A. 5	0	0	0	0	0	0	0	0	0	0	0	0
P.A. 6	0	0	0	0	0	0	0	0	0	0	0	0
P.A. 7	0	0	0	0	0	0	0	0	0	0	0	0
P.A. 17	0	0	0	0	0	0	0	0	0	0	0	0
P.A. 18	0	0	0	0	0	0	0	0	0	0	0	0
P.A. 22	0	0	0	0	0	0	0	0	0	0	0	0
P.A. 23	0	0	0	0	0	0	0	0	0	0	0	0
(4)(5) P.A. 26	0	0	0	0	0	0	0	0	0	0	0	0
P.A. 27	0	0	0	0	0	0	0	0	0	0	0	0
P.A. 38	0	0	0	0	0	0	0	0	0	0	0	626 to 1000
3. (6) UCI												
P.A. 50	0	0	0	0	0	0	0	0	0	0 to 6105	0	0
4. (7) MCAS												
EL TORO												
P.A. 51	0	0	0	0	0	0	0	0	0	0	0	0



- (1) The General Plan residential density ranges and the corresponding dwelling unit totals are consistent with the General Plan Land Use Element Figure A-10, which established the overall permitted range and totals per residential category.
- (2) The General Plan residential density ranges and the corresponding dwelling units totals are based on a gross acre figure.
- (3) The gross acreage calculations for the residential density ranges were derived from the Land Use Element map using a computerized planimeter.
- (4) Within the Multi-Use Land Use Element category for Planning Areas 12 and 26 medium-high density residential (10 to 25 du/ac) is permitted.
- (5) Within the Multi-Use category for Planning Area 26 up to 800 dwelling units will be allowed in lieu of commercial development provided that the total allowable commercial development is reduced by an amount equivalent to the traffic generated by the dwelling unit (in average daily vehicle trips see Table A-5 for multi-use square footage total).
- (6) Land use authority and related regulatory activities are controlled by the University of California. Residential dwelling unit totals are based on the University's Long-Range Development Plan.
- (7) Land use authority and related regulatory activities are controlled by the United States Department of Defense - Marine Corps - Residential dwelling unit totals obtained from the Marine Corps - Community Plans and Liaison Department.
- (8) Portions of Planning Areas 10 and 12 have been zoned for residential purposes. Residential zoning for Planning Area 10 allows 2,060 dwelling units, while Planning Area 12 allows 1,326 dwelling units. The balance of Planning Areas 10 and 12 have been zoned as development reserve. As such subsequent zoning approvals will be necessary prior to utilizing the remaining General Plan residential intensity within each Planning Area. The remaining Residential Intensity for Planning Area 10 is 1,955 dwelling units, while Planning Area 12 is 4,050 dwelling units.
- (9) The Zoning Ordinance residential intensity ranges are based on net acreage figures.

#### ZONING ORDINANCE FOOTNOTES

- (10) The Zoning Ordinance residential density ranges and corresponding dwelling unit totals are consistent with the Zoning Ordinance Planning Area (Village) summary totals, which established the overall permitted total.
  - (11) The Zoning Ordinance residential density ranges and the corresponding dwelling units totals are based on a net acre figure. The net acre figure was derived by excluding General Plan Circulation Element roadway rights-of-way requirements from the General Plan gross acreage figures.
  - (12) The net acreage calculations for the Residential density ranges were derived from the zoning map using a computerized planimeter.
- \* Indicates total number of dwelling units that have been over-built within that particular residential category.

FIGURE C-3

## AGE OF PERSONS LIVING IN IRVINE

<u>AGE</u>	<u>Males</u>	<u>Females</u>	<u>Total</u>	<u>% of Total</u>
<1	694	715	1,409	1.44
1-4	2,619	2,617	5,236	5.35
5-12	6,792	6,351	13,143	13.43
13-17	3,994	4,097	8,091	8.27
Subtotal	14,100	13,780	27,880	28.49
18-21	3,832	3,766	7,598	7.76
22-24	2,268	2,583	4,851	4.96
25-34	10,368	11,944	22,312	22.80
35-44	8,381	8,190	16,571	16.93
45-54	4,743	4,312	9,055	9.25
55-59	1,849	1,823	3,672	3.75
60	282	255	537	0.55
61-64	855	944	1,799	1.84
Subtotal	32,567	33,827	66,394	67.84
65-74	1,156	1,500	2,656	2.71
75-84	329	447	776	0.79
85+	60	107	167	0.17
Subtotal	1,545	2,054	3,599	3.68
Total	48,212	49,661	97,873	100.00

Source: 1980 Federal Census of Population and Housing data updated via straight-line extrapolation to 1988 population base.

NOTE: Columns may not equal totals, due to rounding off.

FIGURE C-4

1980 HOUSEHOLD COMPOSITION

	<u>#</u>	<u>% of Total</u>
1 Person, No Children under 18	4,575	21.4
2 or more Persons, No Children under 18	7,136	33.5
1 Person, 1 or more Children under 18	1,884	8.8
2 or more Persons, 1 or more Children under 18	7,742	36.3

Source: 1980 Federal Census of Population and Housing

1979 HOUSEHOLD INCOME

5,000	564	2.6
5,000 - 7,499	376	1.7
7,500 - 9,999	419	2.0
10,000 - 14,999	1,577	7.4
15,000 - 19,999	2,112	9.9
20,000 - 24,999	2,460	11.5
25,000 - 34,999	5,055	23.6
35,000 - 49,999	5,310	24.8
50,000 +	3,542	16.5

Source: 1980 Federal Census of Population and Housing

YEARS OF SCHOOL COMPLETED BY PERSONS AGE 25 AND OVER

Elementary (0 to 8 Years)	635	1.7
High School		
1 - 3 Years	1,158	3.2
4 Years	8,124	22.1
College		
1 - 3 Years	10,391	28.3
4 or More Years	16,410	44.7
Total	36,718	100.00

Source: 1980 Federal Census of Population and Housing



FIGURE C-5

## ETHNICITY OF IRVINE RESIDENTS

<u>Ethnicity</u>	<u>#</u>	<u>% of Total</u>
White	85,933	87.8
Black	1,443	1.5
American Indian, Eskimo, and Aleutian	309	.3
Japanese	1,782	1.8
Chinese	1,974	2.0
Vietnamese	657	.7
Other Asian and Pacific Islander	3,205	3.3
Other	2,570	2.6
Total	97,873	100.0
Spanish Origin Regardless of Race	5,910	6.0

Source: 1980 Federal Census of Population and Housing data updated via straight-line extrapolation to 1988 population base.

FIGURE C-6

HOUSING IN IRVINE BY YEAR STRUCTURE BUILT

TOTAL YEAR-ROUND HOUSING UNITS	22,488
1979 to March 1980	4,160
1975 to 1978	9,114
1970 to 1974	7,195
1960 to 1969	1,957
1950 to 1959	49
1940 to 1949	6
1939 or earlier	7
 TOTAL OCCUPIED HOUSING UNITS	 21,337
1979 to March 1980	3,521
1975 to 1978	8,743
1970 to 1974	7,092
1960 to 1969	1,919
1950 to 1959	49
1940 to 1949	6
1939 or earlier	7
 TOTAL RENTER OCCUPIED UNITS	 5,760
1979 to March 1980	561
1975 to 1978	2,796
1970 to 1974	1,854
1960 to 1969	503
1950 to 1959	40
1940 to 1949	6
1939 or earlier	0
 TOTAL OWNER OCCUPIED UNITS (3)	 15,577
1979 to March 1980	2,960
1975 to 1978	5,947
1970 to 1974	5,238
1960 to 1969	1,416
1950 to 1959	9
1940 to 1949	0
1939 or earlier	7

Source: 1980 Census

FIGURE C-7

## MEDIAN EXISTING SINGLE FAMILY DETACHED HOME PRICES

## JUNE 1988 HOUSING AFFORDABILITY INDEX

	<u>MEDIAN HOME SALES PRICE</u>	<u>MONTHLY HOUSING PAYMENT*</u>	<u>MINIMUM QUALIFYING ANNUAL INCOME*</u>	<u>PERCENT HOUSEHOLDS QUALIFYING</u>
Orange County	\$211,038	\$1,639	\$65,559	20%
United States	90,600	704	28,145	47%
California	167,428	1,300	52,001	25%
Los Angeles	182,364	1,416	56,651	19%
San Francisco Bay	209,687	1,628	65,139	13%
San Diego	147,605	1,416	45,853	26%
Sacramento	92,708	720	28,800	50%
Riverside/San Bernardino	108,567	843	33,726	42%

## JUNE 1987 HOUSING AFFORDABILITY INDEX

	<u>MEDIAN HOME SALES PRICE</u>	<u>MONTHLY HOUSING PAYMENT*</u>	<u>MINIMUM QUALIFYING ANNUAL INCOME*</u>	<u>PERCENT HOUSEHOLDS QUALIFYING</u>
Orange County	\$170,163	\$1,328	\$53,138	29%
United States	85,200	665	26,606	49%
California	140,620	1,098	43,912	32%
Los Angeles	148,670	1,161	46,426	27%
San Francisco Bay	173,098	1,351	54,054	17%
San Diego	125,488	980	39,187	32%
Sacramento	87,276	681	27,254	51%
Riverside/San Bernardino	96,922	757	30,266	46%

## AVERAGE MORTGAGE INTEREST RATES

JUNE 1988

9.31%\*\*

JUNE 1987

9.38%

\*revised

\*\*preliminary

Source: California Association of Realtors



FIGURE C-8

AVERAGE SALES PRICE OF HOMES IN SOUTH ORANGE COUNTY IN 1987

Newport Beach	\$545,000
Laguna Beach	\$274,276
Laguna Niguel	\$255,388
Capistrano Beach	\$255,300
San Clemente	\$214,649
Dana Point	\$209,500
Costa Mesa	\$203,000
Lake Forest	\$192,145
Irvine	\$189,950
Laguna Hills	\$185,059
Mission Viejo	\$179,423
San Juan Capistrano	\$177,540
El Toro	\$139,987

Source: Grubb & Ellis

## SAMPLE HOMEOWNERSHIP COSTS FOR NEW UNITS IN IRVINE

## FINANCING

## ONE BEDROOM CONDOMINIUM (692 sq. ft.)

## TWO BEDROOM CONDOMINIUM (840 sq. ft.)

INTEREST RATE 8.150%	CASH REQD
PRICE \$101,990	
LOAN AMT 98,950	
DOWN PAY 2.9%	3,040
LOAN ORIGATION FEE	990
MISC CLOSING COSTS	500
1 MONTH PREPAID INTEREST	672
LOAN 737	
MORT INS 41 (2 MOS)	82
ASSOC FEES 122 (2 MOS)	244
PROP TAX 187 (6 MOS)	1,122
TOTALS \$1,087 /MO	\$6,650

INTEREST RATE 8.150%	CASH REQD
PRICE \$126,990	
LOAN AMT 101,250*	
DOWN PAY 20.2%	25,740
LOAN ORIGATION FEE	1,013
MISC CLOSING COSTS	500
1 MONTH PREPAID INTEREST	688
LOAN 754	
MORT INS 42 (2 MOS)	84
ASSOC FEES 122 (2 MOS)	244
PROP TAX 233 (6 MOS)	1,398
TOTALS \$1,151 /MO	\$29,667

CONVENTIONAL  
30-YEAR  
FIXED RATE  
MORTGAGE  
FINANCING

INTEREST RATE 10.500%	CASH REQD
PRICE \$101,990	
LOAN AMT 91,750	
DOWN PAY 10.0%	10,240
LOAN ORIGATION FEE	2,135
MISC CLOSING COSTS	750
1 MONTH PREPAID INTEREST	803
LOAN 840	
MORT INS 22 (PREM+2 MOS)	641
ASSOC FEES 122 (2 MOS)	244
PROP TAX 187 (6 MOS)	1,122
TOTALS \$1,171 /MO	\$15,935

INTEREST RATE 10.500%	CASH REQD
PRICE \$126,990	
LOAN AMT 114,250	
DOWN PAY 10.0%	12,740
LOAN ORIGATION FEE	2,585
MISC CLOSING COSTS	750
1 MONTH PREPAID INTEREST	1,000
LOAN 1,046	
MORT INS 28 (PREM+2 MOS)	798
ASSOC FEES 122 (2 MOS)	244
PROP TAX 233 (6 MOS)	1,398
TOTALS \$1,429 /MO	\$19,515

ADJUSTABLE  
RATE  
MORTGAGE  
FINANCING

INTEREST RATE 7.375%	CASH REQD
PRICE \$101,990	
LOAN AMT 91,750	
DOWN PAY 10.0%	10,240
LOAN ORIGATION FEE	2,135
MISC CLOSING COSTS	750
1 MONTH PREPAID INTEREST	564
LOAN 634 - 1ST YEAR	
MORT INS 29 (PREM+2 MOS)	745
ASSOC FEES 122 (2 MOS)	244
PROP TAX 187 (6 MOS)	1,122
TOTALS \$927 /MO	\$15,800

INTEREST RATE 7.375%	CASH REQD
PRICE \$126,990	
LOAN AMT 114,250	
DOWN PAY 10.0%	12,740
LOAN ORIGATION FEE	2,585
MISC CLOSING COSTS	750
1 MONTH PREPAID INTEREST	702
LOAN 790 - 1ST YEAR	
MORT INS 36 (PREM+2 MOS)	928
ASSOC FEES 122 (2 MOS)	244
PROP TAX 233 (6 MOS)	1,398
TOTALS \$1,181 /MO	\$19,347

\*County Tax Exempt Bonds were only available for financing up to \$101,250 for each unit.

Source: Tiempo Sales Office, Westpark, Irvine, June, 1988 for "Aurora," Plan A and "Brisas" Plan B

FIGURE C-10  
HUD INCOME ADJUSTMENTS ACCORDING TO HOUSEHOLD SIZE

1 person	=	.70 x HUD County Median Income
2 persons	=	.80 x HUD County Median Income
3 persons	=	.90 x HUD County Median Income
4 persons	=	1.0 x HUD County Median Income
5 persons	=	1.0625 x HUD County Median Income
6 persons	=	1.125 x HUD County Median Income
7 persons	=	1.1875 x HUD County Median Income
8+ persons	=	1.25 x HUD County Median Income

Source: HUD area office, Los Angeles



FIGURE C-11

INCOME GROUPS BY HOUSEHOLD SIZE  
ORANGE COUNTY, 1988\*

<u>Household Size</u>	<u>Very Low Income (0-50% of Median)</u>	<u>Low Income (50-80% of Median)</u>
1 person	0-15,550	15,551-22,700
2 persons	0-17,750	17,751-25,900
3 persons	0-20,000	20,001-29,150
4 persons	0-22,200	22,201-32,400
5 persons	0-24,000	24,001-34,450
6 persons	0-25,750	25,751-36,450

AFFORDABLE MONTHLY HOUSING COST  
ORANGE COUNTY, 1988

<u>Household Size</u>	<u>Very Low Income</u>	<u>Low Income</u>
1 person	0-389	390-568
2 persons	0-444	445-648
3 persons	0-500	501-729
4 persons	0-555	556-810
5 persons	0-600	601-861
6 persons	0-644	645-911

FIGURE C-12

## HOUSING

## COMPARATIVE INCOME, CONSUMER PRICE INDEX, AND HOUSING COST INCREASES

YEAR	MEDIAN FAMILY INCOME <sup>1</sup>	% CHANGE 1979-1988	CPI-ALL <sup>2</sup> ITEMS (1967 BASE)	% CHANGE 1979-1988	CPI <sup>2</sup> HOUSING (1967 BASE)*	% CHANGE 1979-1988	MEDIAN HOME RESALE PRICES <sup>3</sup>	% CHANGE 1979-1988
1979	26,060		213.7		223.8		98,832 (July)	
1988	44,400	70.4	360.9	68.9	404.7	80.8	211,032 (June)	113.5

\*Note: CPI Housing includes measurement of both renter and owner costs.

Source:

1. U. S. Department of Housing and Urban Development
2. Orange County Progress Report 1978-79 Vol. 15, County of Orange
3. Orange County Progress Report 1987-1988 Vol. 21, County of Orange and California Association of Realtors

FIGURE C-13

PERCENTAGE OF HOUSEHOLD INCOME IN 1979 PAID FOR RENT OR OWNER COSTS  
BY IRVINE RESIDENTS

	Less <u>Than 20%</u>	<u>20-24%</u>	<u>25-34%</u>	Greater <u>than 35%</u>	<u>Not Computed</u>
Households with Incomes Below \$9,999					
Renter	0	0	11	680	59
Owner	16	13	12	253	56
Households with Incomes \$10,000 to \$19,999					
Renter	41	108	583	784	11
Owner	127	73	180	702	0
Households with Incomes Above \$20,000					
Renter	1671	848	735	70	13
Owner	3553	1420	2183	1471	0
Totals	5408	2462	3704	3960	139
	(34.5%)	(15.7%)	(23.6%)	(25.3%)	(0.8%)

Source: 1980 Census



## IRVINE EMPLOYEES BY INCOME CATEGORIES

TRACT #	\$1 - \$2,999	\$3,000- \$4,999	\$5,000- \$7,999	\$8,000- \$9,999	\$10,000- \$14,999	\$15,000- \$19,999	\$20,000- \$24,999	\$25,000- \$34,999	\$35,000- \$49,999	\$50,000- OR MORE	TRACT TOTAL
000000	51	19	46	73	187	155	126	174	72	14	917
052405	247	225	898	401	1037	543	305	292	47	33	4028
052406	7	0	0	14	52	0	9	0	13	0	95
052407	28	0	18	21	23	12	18	82	12	0	214
052501	1886	1377	3570	3055	6947	4924	3698	2883	1432	615	30387
052503	98	65	48	29	58	89	39	27	12	0	465
052504	73	31	24	11	102	45	33	31	17	15	382
052505	105	67	62	10	71	65	71	37	14	15	517
052506	4	32	0	0	20	11	12	13	0	0	92
052507	12	15	20	0	0	12	0	0	0	0	59
052508	80	59	39	34	91	91	60	33	12	23	522
052509	21	0	26	6	0	0	0	0	26	0	79
052510	44	0	55	48	54	23	30	51	24	17	346
062604	0	0	9	0	0	0	17	0	0	0	26
062610	1505	1061	2211	1978	5080	3462	3136	3304	1696	905	24338
062611	17	15	53	8	75	25	29	47	19	26	314
062612	155	191	193	100	204	93	130	63	56	23	1208
062613	0	0	12	0	0	0	0	0	0	0	12
062614	728	686	699	462	809	512	456	430	88	122	4992
062615	67	59	63	37	197	101	55	82	10	10	681
062616	178	63	63	48	119	54	62	39	26	27	679
062621	0	0	24	0	11	0	16	11	0	0	62
TOTAL	5306	3965	8133	6335	15137	10217	8302	7599	3576	1845	70415
% TOTAL	7.5	5.6	11.6	9.0	21.5	14.5	11.8	10.8	5.1	2.6	100.0

Sources: 1980 Census, County Median Income for Households is \$22,802.

Note: 30% of County Median Income is \$ 6,842  
 50% of County Median Income is \$11,401  
 80% of County Median Income is \$18,242  
 120% of County Median Income is \$27,362

FIGURE C-15

MAJOR EMPLOYERS  
IN THE CITY OF IRVINE

<u>BUSINESS</u>	<u>DESCRIPTION</u>	<u># EMPLOYEES</u>
Irvine Marriot Hotel	Hotels With Liquor	500
Toshiba America, Inc.	Office Equipment	520
Baxter Healthcare Corp.	Instruments	523
Coopervision Surgical	Medical Instruments	529
St. Johns Knits Co.	Knit Outerwear Goods	556
Lucky Stores #904/906	Special Warehousing & Storage	600
Smith Tool/Division of	Special Industry Machinery	601
City of Irvine*	Municipality	611
Irvine Valencia Growers	Sorting/Grading/Packing Serv.	650
Charlton Associates	Electronics Equipment & Supplies	685
Bentley Labs, Inc.	Medical Instruments	700
Taco Bell	Corporate Office	750
Printronic, Inc.	Electric Equipment & Supplies	815
Hughes Aircraft Co.	Aircraft Parts & Auxil. Equipment	818
Ricoh Electronics, Inc.	Office Machines, Small	820
AST Research, Inc.	Electronic Equipment & Supplies	900
Shiley, Inc.	Medical Equipment	1,112
Western Digital Corp., Inc.	Electronic Equipment & Supplies	1,211
Allergan, Inc.	Pharmaceutical Preparation	1,475
Parker Hannifin	Biomedical Division	1,508
Edwards Laboratory	Division Medical Instruments	1,634
Kendall McGaw Labs, Inc.	Pharmaceutical Preparation	1,671
Irvine Unified School Dist.*	Educational	1,805
Fluor Corporation	Engineering and Construction	1,935
University of Calif, Irvine*	Educational	11,014

Source: City of Irvine Business Permits as of June 1988 for employers with over 500 employees except for those indicated \* which were obtained by contacting employer.

FIGURE C-16

LARGEST EMPLOYMENT TYPES  
IN THE CITY OF IRVINE

<u>BUSINESS DESCRIPTION</u>	<u>SIC</u>	<u># OF BUSINESSES</u>	<u># OF EMPS.</u>
<u>10,000+</u>			
Electronic Components & Accessories	36	136	10,547
<u>5,000-10,000</u>			
Business Services	73	585	8,700
Medical Instruments, Surgical Apparatus	38	22	6,313
<u>2,000-5,000</u>			
Wholesale Trade, Durable Goods	50	154	3,750
Eng/Acc/Research/Public Relations	87	489	3,430
Manufacturing Industries	39	103	3,404
Chemicals and Allied Products	28	6	3,366
Transportation Equipment	37	17	3,213
Misc. Retail Stores	59	485	3,060
Machinery, Indus./Comm./Computer Equipment	35	30	2,975
Radio T.V. & Consumer Electronic Stores	57	160	2,873
Engineering Services	87	59	2,610
Eating and Drinking Places	58	108	2,602
Measuring/Controlling Devices, Surgical	38	19	2,327
Fed & Personal Credit Inst./Mortg. Bankers	61	83	2,124
Insurance Agents, Brokers & Services	64	92	2,012
<u>1,000-2,000</u>			
Investors, Nec.	67	114	1,736
Hotels and Motels	70	9	1,696
Auto Dealers & Gas Service Stations	55	83	1,466
Printing, Publishing Industries	27	81	1,310
Nondurable Goods, Nec.	51	115	1,276
Executive Offices	91	30	1,146
Real Estate Operators & Lessors	65	115	1,118
General Contractors Misc.	15	95	1,106
Land Subdividers/Dvlprs./Except Cemetery	65	112	1,055
<u>500-1,000</u>			
Motor Freight Trans. & Warehouse Misc.	42	41	943
Misc. Personal Services Nec.	72	126	762
Membership Organizations	86	19	750
Grocery Stores	54	30	731
Furniture and Fixtures Misc.	25	14	727
Noncommercial Research Organizations	87	56	684
Crop Prep, Srve. for Mkt., Except Cotton	7	1	650
Accounting/Auditing/Bookkeeping Services	87	76	573
Textile Mill Products Misc.	22	2	568
Wholesale Trade, Nondurable Goods	51	24	547
Commercial Art & Graphic Design	73	44	504
Radiotelephone Communications	48	5	500

Source: City of Irvine Business Permits as of June 1988



FIGURE C-17

AVERAGE MORTGAGE RATES  
(Rates offered by California lenders)

<u>Type</u>	<u>Avg. rate</u>	<u>Lowest rate</u>	<u>Avg. fees</u>	<u>Avg. pts.</u>	<u>APR</u>
<b>First mortgages</b>					
Conforming 30-year, fixed	10.43%	10.00%	\$298	2.00	10.71
Jumbo 30-year, fixed	11.16	10.75	285	1.91	11.44
Conforming 15-year, fixed	10.21	9.75	296	1.89	10.60
Jumbo 15-year, fixed	10.87	10.50	279	1.84	11.25
Conforming 30-year, adjustable	8.32	7.00	307	2.25	8.60
Jumbo 30-year, adjustable	8.41	7.00	314	2.22	8.69
<b>Second mortgages</b>					
Conforming 15-year, fixed	11.27%	10.89%	\$225	3.72	12.01

Conforming loans are loans that do not exceed \$168,700; jumbo loans are for more than that amount. Average fees reflect one-time charges made by lenders, typically when the borrower first applies for the loan. Points are usually paid when the loan closes; one point equals one percent of the total loan amount. APR is the total annual financing cost, expressed as a percentage. The APR for adjustable loans is based on an index designated by the lender, and assumes that the initial rate will not change. Rates quoted as of June 15, 1988.

Source: CompuFund Inc., Santa Ana

FIGURE C-18  
CITY OF IRVINE  
DEVELOPMENT PROJECT COSTS

<u>CHARGES/FEES</u>	<u>BASIS</u>	<u>RECIPIENT</u>
<u>Processing Charges:</u>	\$69.31 per hour (Deposit required)	Community Development
Planning/Engineering Services Transportation Services	\$69.31 (Deposit Required)	Transportation Svcs.
Encroachment Permits	Hourly and/or linear feet	Inspection Services
<u>Building Related Fees:</u>		
Permit Issuance	\$6 each	Community Development
Building Permits	Building Valuation	Inspection Services
Plan Check Fees - Building	65% of Building Permit Fee	Community Development
Energy Enforcement Surcharge (State Mandated)	\$27.50 per 1,000 sq. ft. up to 4,000 sq. ft.	Inspection Services
Energy Plan Check Fees	65% of Energy Surcharge	Community Development
Plumbing Permit	Number of Hookups	Inspection Services
Electrical Permits	Number of units, switches, fixtures	Inspection Services
Mechanical Permits	BTU's, & Installation of furnace	Inspection Services
Occupancy & Real Estate Inspections	\$131.00	Inspection Services
Special Inspections	\$158.00	Inspection Services
Temporary Certificate of Occupancy	\$158.00 each 30 days	Inspection Services
Re-Inspection Fee	\$55.00	Inspection Services
Variance Application	\$158.00	Inspection Services
Seismic Tax (Strong Motion Instrumentation Program)	7¢ for each \$1,000 Valu- ation for Residential 1-3 stories	State of California

## DEVELOPMENT PROJECT COSTS

CHARGES/FEESBASISRECIPIENTSystems Development charges  
(Roadways, Maintenance)

1% of valuation

Systems Dev. Fund

Irvine Business Complex

No fee for Residential  
Development

Micro Film

\$.54/page

City Clerk

Slurry Seal

\$35.00/Residential

Public Services

Transportation Corridor

San Joaquin:

S.F.=(A) \$1,372/unit

or (B) \$1,062/unit

M.F.=(A) \$799/unit or

(B) \$620/unit

Transportation corridor  
agencyFoothill:

S.F.=(A) \$1,360/unit

or (B) \$967/unit

M.F.=(A) \$794/unit

or (B) \$563/unit

(may be deleted if

non-profit owns land)

Sewage Connection Fee

Square Feet (IBC only)

95% O.C. Sanitation  
Dist. 5% City C.D.

Park Code

5 acres per 1,000.

Reduced to 3.5 acres for  
affordable units. In-  
lieu fee possible for  
community parks portionCommunity Services  
(Quimby Act Fund)



FIGURE C-19

**AGRICULTURAL EMPLOYMENT  
IN THE CITY OF IRVINE\***

<u>COMPANY</u>			<u># EMPLOYEES</u>	
<u>NURSERIES</u>	<u>ACRES</u>	<u>CROP</u>	<u>LOW</u>	<u>HIGH</u>
Laguna Farms	52	Row	5	100
Greenspear		NO RESPONSE		
Ito Farms	110	Strawberries	3	160
Kawamura & Fojishige	40	Strawberries/Beans Cabbage	3	50
Kayano Farms	30	Vegetables	10	30
K&W Farms	80	Strawberries	7	180
D&R Manassero	18	Strawberries	2	40
Murai Farms	650	Strawberries	100	300
Murakami Bros.	33	Strawberries	10	80
Sadakane Farms	116	Vegetables	20	80
S.E.K. Farms	30	Strawberries	5	45
Tenaka Farms	95	Fruits/Vegetables	50	150
Western Marketing	460	Vegetables (celery, squash, cabbage, beans)	150	200
Treasure Farms	7500	Vegetables/Orchards	72	1400
TOTAL	9214		437	2815
<u>FARMS</u>				
Rogers Gardens		NO RESPONSE		
Sea Tree	160	Trees	60	60
Sunny Slope Trees	25	Trees	15	15
All Ag., Inc.		NO RESPONSE		
Crowl Nurseries		NO RESPONSE		
El Modeno Gardens	100	Blooming Plants	225	250
Hines Wholesale	420	Ornamental Plants/Shrubs	450	650
Jackson & Perkins Co.	1	Lab Stock	2	6
Keeline-Wilcox	20	Indoor Plants	15	30
Peltzer Pines	40	Christmas Trees	2	10
TOTAL	766		769	946
<b>TOTAL</b>	<b>9980</b>		<b>1206</b>	<b>3761</b>

\*Includes Sphere of Influence

Source: Information detained from City of Irvine Telephone Survey and Irvine Company land lease list.

FIGURE C-20

CITY OF IRVINE COMMERCIAL AND INDUSTRIAL  
SQUARE FOOTAGE FOR 1987  
AND BUILDOUT

	<u>1987</u>	<u>CITY BUILDOUT</u>
District Commercial	284,999	1,689,927
Special Commercial	467,958	870,280
General Commercial	1,536,750	6,374,719
Regional Commercial	140,000	10,188,980
Commercial Recreational	110,013	228,139
Research & Industrial	6,310,128	46,774,414
Business/Industrial	36,834,920	48,254,153
Multi-Use	284,567	2,219,320
TOTAL	46,790,360	118,159,593

\*Includes City and Sphere of Influence

Source: File 5, Preferred General Plan Commercial/Industrial  
Categories

## FIGURE C-21

### RESOURCES FOR DEVELOPMENT ASSISTANCE IN IRVINE

#### 1. Community Development Block Grant Program (CDBG)

CDBG funds are issued by the Federal Department of Housing and Urban Development (HUD) to develop "decent housing and a suitable living environment" principally for low income households. Funds can be used for land acquisition or to improve sites for low income housing. Up to 15% of the funds can be used for public services groups such as Irvine Temporary Housing.

#### 2. Tax Credit

The Federal and State government offer tax credits to owners of housing developments with 20% of the units occupied by households at 50% or below the median income or 40% of the units occupied by households at 60% or below of the County median income. Rent cannot exceed 30% of the qualifying income limitations. The Federal credit is claimed annually over ten years and the State credit is claimed annually over four years. Contact the California Mortgage Bond and Tax Credit Allocation Committee for information on the State Program.

#### 3. Tax Exempt Mortgage Bonds

The Federal and State government give authority to municipalities to issue tax-exempt revenue bonds for the construction or mortgage financing of for-sale and rental very low, low and moderate income housing. This authority has lately been very limited.

#### 4. State Rental Housing Construction Program

The California Housing Finance Agency (CHFA) provides loan funds for the development of rental housing where at least 30% of the units are for low and very low income households. The remaining units may be made available to moderate income households. Call (916) 324-6319 for more information.

#### 5. State Urban Pre-development Loan Funds

The State Housing and Community Development Department (HCD) provides low interest loans to localities and non-profit organizations for site acquisition and preparation costs, architectural engineering, legal, permit and application fees and bonding expenses. The loan term is one to three years at 7% interest. Call (916) 324-6320 for more information.

#### 6. Technical Assistance and Loans for Mobilehome Park Conversions

State HCD offers low interest loans and technical assistance to residents of mobile home parks who wish to purchase to purchase their parks. The Groves Mobilehome Park used this fund to convert to a cooperative.



RESOURCES FOR DEVELOPMENT ASSISTANCE  
IN IRVINE (Cont.)

7. Federal Housing Administration Insured Mortgage (FHA)

The Federal government has insured mortgages loans available to qualified households who desire to purchase homes.

8. Section 8 Subsidies

Rents for very low income residents can be reduced through this program funded by the U.S. Dept. of Housing and Urban Development (HUD). These subsidies are allocated to units themselves through the now de-funded New Construction Section 8 program, or through subsidies in the form of "certificates" or "vouchers" disseminated to renters through the local Housing Authority. Call 836-3033 for more information.

9. Stuart B. McKinney Act/Federal Emergency Management Agency Funds

Non-profit organizations and localities may seek grants from HUD for rehabilitation, new construction for the disabled homeless, operating and supplemental service money for transitional and emergency shelters for the homeless.

10. Orange County Housing Authority Operating Reserve Funds

The Orange County Housing Authority has over 7 million dollars accumulated due to an excess in operating reserves. OCHA will offer loans and technical assistance to private and nonprofit developers and localities who develop or preserve rental housing which have a portion of the units available to very low income households. Call 836-3078 for more information.

11. Rental Rehabilitation Program

The HUD-funded Rental Rehabilitation Program is designed to provide rental assistance to tenants occupying rehabilitated units. Property owners obtain favorable rehabilitation financing assistance and may lease units to existing tenants qualifying under specific program guidelines. Total allocations number 358 units in Orange County, as of July, 1988.

12. Moderate Rehabilitation Program

The Moderate Rehabilitation Program (MRP) is also funded by the U.S. Department of Housing and Urban Development. It is an incentive program designed to encourage single- and multi-family property owners to upgrade their dwelling units, to provide rents which amortize the loan over a fifteen-year contract, and provide housing assistance for low and moderate income families, elderly, and/or handicapped persons.

The Orange County Housing Authority administers both rehabilitation programs. Call 836-3040 for more information.

RESOURCES FOR DEVELOPMENT ASSISTANCE  
IN IRVINE (Cont.)

13. Nehemiah Home Ownership

HUD in this program offers nonprofit community organizations grants to make deferred non-interest loans up to \$15,000 to help residents buy newly built or rehabed homes in low/moderate neighborhoods. Only four projects nationwide are likely to be funded.

14. Section 202 Elderly and Handicapped Housing Loans

HUD provides direct loans for rental or cooperative housing and related facilities. Low interest loans for construction or rehabilitation. Non-profit corporations and consumer cooperatives may apply.

15. Veterans Administration Funds (VA)

The VA guarantees loans to qualified veterans to buy, build, alter, repair, or improve a home, buy a mobilehome, or refinance existing mortgages. Call 800-352-6592 for more information.

16. Local Initiatives Support Corporation (LISC)

LISC was formed in 1980 to provide financial and technical assistance to non-profit community development corporations throughout the United States. Over eight years LISC has assembled more than \$132 million from corporations and foundations and assisted more than 450 community development corporations. For more information call the Los Angeles office at (213) 624-2995.

17. State Propositions 84 and 77 Funds

The State of California has funds available for rehabilitation and new construction of housing. Call (916) 445-6501 for more information.

18. Self-Help Housing Program

The State Housing and Community Development Department designed a program to assist low and moderate income households to build or rehabilitate their own homes by providing technical assistance grants to non-profit corporations and local governments. Call (916) 324-6337 for information.

For more programs, call the State Department of Housing and Community Development at (916) 342-8652.

FIGURE C-22

INVENTORY OF AFFORDABLE UNITS  
AT RISK OF CONVERSION FROM JULY 1, 1989 THROUGH JULY 1, 1999

<u>Proj. No.</u>	<u>Project Name Address</u>	<u>Owner</u>	<u>Total Affordable Units Units (Total / At Risk)</u>	<u>Tenant Type (elderly, family)</u>	<u>Public Assistance</u>	<u>Date of Conversion</u>
1.	Woodbridge Villas 10 Thunder Run	TIC*	258      120 / 60	family	None	7/94
2.	Windwood Knoll 2 Flagstone	TIC	248      120 / 60	family	None	12/95
3.	Woodbridge Cross Creek 22 Creek Rd.	TIC	136      44 / 44	family	Bond	12/95
4.	Stanford Court 400 Stanford	TIC	320      96 / 96	family	Bond	12/95
5.	Harvard Court 146 Berkeley	TIC	112      33 / 33	family	Bond	5/96
6.	Northwood Place 1300 Hayes	TIC	604      186 / 186	family	Bond	10/96
7.	San Marino Villas 403 San Marino	TIC	200      59 / 59	family	Bond	10/96
8.	Cornell Court 146 Berkeley	TIC	109      100 / 78	family	None	10/96
9.	San Leon Villas 1 San Leon	TIC	248      72 / 72	family	Bond	3/97
10.	San Remo Villas 1011 San Remo	TIC	248      76 / 38	family	Bond	1/97



FIGURE C-22 (Cont.)

INVENTORY OF AFFORDABLE UNITS  
AT RISK OF CONVERSION FROM JULY 1, 1989 THROUGH JULY 1, 1999

Proj. No.	Project Name Address	Owner	Total Affordable Units Units (Total / At Risk)	Tenant Type (elderly, family)	Public Assistance	Date of Conversion
11.	Berkeley Court 307 Berkeley	TIC	152      32 / 10	family	Bond	2/98
12.	Dartmouth Court 1100 Stanford	TIC	294      85 / 85	family	Bond	10/98
13.	San Marco Villas 101 Veneto	TIC	426      361 / 228	family	None	8/98
TOTAL AFFORDABLE UNITS AT RISK '89-'99:			1,049			

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\* The Irvine Company

Sources: City of Irvine Affordable Housing Inventory; City permit records; "Inventory of Federally Subsidized Low-Income Rental Units at Risk of Conversion," California Housing Partnership Corporation; rent schedules from The Irvine Company; project owners and managers; bond administrators; and monitoring agents.

FIGURE C-22 (Cont.)

INVENTORY OF AFFORDABLE UNITS  
AT RISK OF CONVERSION FROM JULY 1, 1989 THROUGH JULY 1, 1999

Project Nos. 1, 2 & 8: Woodbridge Villas, Windwood Knoll Apartments, and Cornell Court Apartments include affordable units that satisfy special requirements of a 1977 legal settlement. These three developments provide 198 Income III units<sup>1</sup> which are at risk. The units are provided without public assistance. The units must remain affordable for at least twelve years. Woodbridge Villas (constructed in 1982) and Windwood Knoll (constructed in 1983) each has 60 Income III units which may be converted to market rate units as of June 1994 and December 1995, respectively. An additional 60 affordable units in each development are funded under HUD programs and will not be at risk until 2002 and 2004, respectively. Cornell Court, constructed in 1984, has 78 Income III units which may be converted to market rate units as of October 1996. An additional 22 affordable units are funded by a bond issue and will not be at risk until 2005. The table below identifies by year and by unit size the number of units that may be lost between 1989 and 1999 as a result of the expiration of the affordability terms attached to these units:

Year	Project No.	At Risk Afford Units	Income III Units by # Bdrms			
			S	1	2	3
1994	1	60	0	32	7	21
1995	2	60	0	42	0	18
1996	8	78	0	26	25	27
TOTAL:		198	0	100	32	66

Monitoring the developments for compliance with the terms of the legal settlement is carried out by Irvine Housing Opportunities, Inc., an Irvine-based non-profit housing organization.

Project Nos. 3, 4, 5, 6, 7, 9, 10, 11 & 12: Woodbridge Cross Creek, Stanford Court, Harvard Court, Northwood Place, San Marino Villas, San Leon Villas, San Remo Villas, Berkeley Court and Dartmouth Court were all built using tax-exempt bond financing and, as a result, are required to provide 20% of the total units within the project as affordable to Income III households. Another 10% of most of these projects is also provided for Income II households, pursuant to special negotiations and agreements with the owners. Two of these developments--San Remo Villas and

<sup>1</sup>See page C-22 for definitions of Income I, Income II, Income III and Income IV.

FIGURE C-22 (Cont.)

INVENTORY OF AFFORDABLE UNITS  
AT RISK OF CONVERSION FROM JULY 1, 1989 THROUGH JULY 1, 1999

Berkeley Court--were built in phases, the second phase of which was funded by a different bond issue and provided additional affordable units (38 more affordable units at San Remo Villas at risk in 2000 and 22 more affordable units at Berkeley Court at risk in 2005).

These nine bond-financed projects, providing 623 affordable units throughout Irvine which are at risk of converting to other uses at the end of the current term of affordability, present a potential loss of affordable units each year (from 1995-1998) as follows:

<u>Year</u>	<u>Project No.</u>	<u>At Risk Afford Units</u>	<u>Income II Units by # Bdrms</u>					<u>Income III Units by # Bdrms</u>				
			<u>\$</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>Total</u>	<u>\$</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>Total</u>
1995	3	44	0	0	10	7	17	0	0	25	2	27
	4	96	0	8	24	0	32	0	16	48	0	64
1996	5	33	0	3	8	0	11	0	6	16	0	22
	6	186	0	21	26	17	64	0	46	72	4	122
	7	59	0	4	8	7	19	0	11	29	0	40
1997	9	72	0	6	8	9	23	0	13	34	2	49
	10	38	0	3	7	0	10	0	3	25	0	28
1998	11	10	0	0	0	0	0	4	6	0	0	10
	12	85	3	5	18	0	26	8	9	42	0	59
TOTAL:		623	3	50	109	40	199	8	108	297	8	421

These Income III and Income II units are required to be affordable for a period of 10 years. If, during one year prior to the expiration dates, new tax-exempt bond financing or other government subsidized financing is available, the owner of these projects and the City will meet to negotiate the continued affordability of these units, per the agreements attached to these developments. The City and owner will attempt to identify and secure favorable financing which will permit the continued affordability on similar terms as the current terms. If favorable financing cannot be obtained, the units will be phased into market rents over a two year period.



FIGURE C-22 (Cont.)

INVENTORY OF AFFORDABLE UNITS  
AT RISK OF CONVERSION FROM JULY 1, 1989 THROUGH JULY 1, 1999

In the past, TIC has shown the desire to continue the affordability of bond-financed units. TIC successfully refunded a 1983 bond issue in 1990, which continued the affordability of 226 units for another 15 years.

Project No. 13: San Marco Villas provides 228 units affordable to Income IV households per the terms of the City's inclusionary housing policy. An additional 133 affordable units are funded by a bond issue and will not be at risk until 2000. The 228 units are provided through conventional financing. The terms of the 228 units expire in 1998 and the following 1-, 2-, and 3-bedroom Income IV units may potentially be lost:

<u>Year</u>	<u>Project No.</u>	<u>At Risk Afford Units</u>	<u>Income IV Units by # Bdrms</u>				
			<u>S</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>Total</u>
1998	13	228	0	36	163	29	228

Upon expiration of the affordability terms, the units may be sold, according to the conditional use permit for the project. Each tenant is to be given written notice 180 days prior to the conversion of the rental units to for-sale units. The written notice must provide the tenants the exclusive right to contract to purchase his/her unit within 90 days of the date of the written notice. At the time of initial sale of any inclusionary units, the unit must be offered at a price affordable to low income (Income III) and/or moderate income (Income IV) households.

## FIGURE C-23

### COST ANALYSIS OF REPLACEMENT VERSUS PRESERVATION

The following analysis examines the cost of replacing the 1,049 affordable units at risk of conversion from July 1, 1989 through July 1, 1999 (i.e. the cost of producing new housing comparable in size and rent levels) as well as the cost of preserving the affordability of the affordable units at risk. In comparing these costs, the more cost effective strategies for conserving the affordable units can be identified.

All affordable units at risk of converting to market rate units over the ten-year period are contained within larger developments. Some of the thirteen projects identified also include additional affordable units funded under different sources and which will not be at risk until a later date. Thus, the owner of a project may not be able to convert or sell a project until all affordable requirements expire, and therefore may be interested in assistance for preserving those affordable units currently at risk for at least some period of time. In addition, these affordable units are very much in demand and contribute toward a project's ability to maintain low overall vacancy rates in a geographic area of generally high rents.

#### Cost of Replacement (i.e. New Construction) of Affordable Units:

Replacement of these units upon expiration of the terms of affordability could be achieved through: 1) new construction of mixed income developments; and/or 2) new construction of 100% lower-income developments.

The first possibility is preferable, given City policies for dispersal of affordable units throughout Irvine. In addition, the cost of the affordable units is in part supported by the larger development. For example, an Income II, 2-bedroom unit and 3-bedroom unit within a larger development requires a subsidy of \$47,252 and \$59,675, respectively.<sup>1</sup> An Income III, 2-bedroom unit and a 3-bedroom unit within a larger development requires a subsidy of \$7,939 and \$20,671, respectively. Thus, Woodbridge Cross Creek apartments, for example, with ten 2-bedroom and seven 3-bedroom Income II units and twenty-five 2-bedroom and two 3-bedroom Income III units within a larger development of 136 units, would require a total subsidy of approximately \$1,130,062 to construct today.

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<sup>1</sup>The subsidy costs and development costs identified here are drawn from, "Economics of Affordable Housing Development", prepared by David Paul Rosen & Associates, dated February 24, 1990, and an update to this report, prepared by David Paul Rosen & Associates, dated March 11, 1992.



FIGURE C-23 (Cont.)

COST ANALYSIS OF REPLACEMENT VERSUS PRESERVATION

In comparison, to build a 44-unit development would cost \$3,890,924 (the total development cost of a two and a three bedroom unit is \$85,951 and \$98,071, respectively). To provide all 44 units as affordable may require additional subsidy as the lower, affordable rents may not cover the development's total debt.

Cost of Preservation of Affordability:

Preservation of the affordability of these units could be achieved through: 1) payment of the rent differential between the market rent and the affordable rent (i.e. a rent subsidy to tenants); 2) refinance mortgages to achieve a lower interest rate and therefore a lower monthly debt and rents; 3) assist in the purchase of the project by a buyer committed to maintaining the affordable units (i.e. a non-profit organization); 4) if the project is converted to for-sale units, assist individual buyers, who meet the income requirements, in purchasing a unit.

Rent subsidies for these 1,049 units, on a project-by-project basis, would cost approximately the following<sup>2</sup>:

<u>Project</u>	<u>Cost to Extend for One Year</u>	<u>Cost to Extend through 1999</u>
Woodbridge Villas	\$ 55,860	\$279,300
Windwood Knoll	\$ 47,736	\$190,944
Woodbridge Cross Creek	\$100,878	\$403,512
Stanford Court	\$161,184	\$644,736
Northwood Place	\$308,928	\$926,784
San Marino Villas	\$124,728	\$374,184
Harvard Court	\$ 57,186	\$165,888
Cornell Court	\$ 17,160	\$ 51,480
San Leon Villas	\$190,704	\$381,408
San Remo Villas	\$ 63,894	\$127,788
Berkeley Court	\$ 11,304	\$ 11,304
Dartmouth Court	\$252,408	\$252,408
San Marco Villas	\$ 0	\$ 0
Total:	\$1,391,970	\$3,809,736

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<sup>2</sup>Rent subsidies are based on the difference between a market rent for the project and the maximum affordable rent, by unit size. The total for a project's affordable units is then multiplied by 12 months to identify the cost for one year of subsidy. This total is then multiplied by the number of years remaining until 1999, to identify the cost of subsidy through the end of the next Housing Element cycle. Affordable rents by unit size and income category are those contained in City Council Resolution No. 92-86. Market rents are those identified in TIC rent schedules, dated November 1991 (a market rent was estimated where a unit size was offered at an affordable rent but not at a market rent in the same project).



## FIGURE C-23 (Cont.)

### COST ANALYSIS OF REPLACEMENT VERSUS PRESERVATION

The affordable units at San Marco Villas serve Income IV households. Affordable rents for Income IV households are close to market rents and therefore a rental subsidy would not likely be required to make the unit affordable to this income group. However, should market rents increase substantially, exceeding the Income IV affordable rent, some subsidy might be needed.

A rent subsidy for some of these units could be a feasible option as well as an attractive option for owners for preserving the affordable units. A market rent is available to the project owner while an affordable rent is provided to the tenant. The disadvantage of a rent subsidy is the lack of any equity or increased ownership despite the investment of funds to provide an affordable unit.

Refinancing projects is another option to preserve affordability. Interest rates have decreased significantly since the construction of these thirteen projects. In the case of bond-financed projects, new affordability restrictions could be negotiated in return for refunding the bond issue. Such refinancing and/or refunding of bond issues could be the most cost effective means to extend and ensure affordability for another significant period.

Acquisition of any one of these 13 developments by another party interested in maintaining the affordable units appears to be a very costly option and perhaps not feasible given the current high cost of real estate and the difficulty in obtaining sufficient resources for such a purchase. In addition, TIC, the current owner of the thirteen at risk projects, has shown interest in maintaining ownership as well as in preserving the affordability, if the resources can be obtained.

Assistance to homebuyers could be feasible should the current project owners desire to convert a project to for-sale units. Up to \$15,000 of assistance per Income III or Income IV buyer could be required. For some units, this could be a feasible option. Assistance for Income II buyers would be much more costly.

## FIGURE C-24

### RESOURCES FOR PRESERVATION

Many of the resources listed here are also identified in Figure C-21 for development assistance for new affordable housing units. Thus, efforts to preserve and efforts to increase the affordable housing stock will be competing for some of the same resources.

The City has some financial resources that could be used for the preservation of affordable units. Currently, the City receives approximately \$485,000 per year in COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) funds, of which up to approximately \$315,000 is made available for affordable housing projects (the City's allocation of CDBG funds from the federal government generally increases each year). The MULTIFAMILY HOUSING FUND is another source of City funds. This fund consists of the fees the City collects for the issuance of tax-exempt bonds. Approximately \$190,000 is received each year. The use of these funds is relatively flexible and could include new construction, acquisition, rent subsidies or homebuyer assistance. The City may also adopt an IN-LIEU FEE PROGRAM, where in place of providing affordable units within a residential development, a residential developer may dedicate an in-lieu fee to a housing trust fund. The fees collected could be used toward preservation of affordability of existing units or toward new construction of replacement affordable units.

Sources of funds available from other public agencies include the ORANGE COUNTY HOUSING AUTHORITY OPERATING RESERVES. These funds are available for a variety of housing development activities.

Specialized public funds are available through STATE AND FEDERAL PROGRAMS, such as: HUD Section 202 funds for elderly and/or disabled housing; HOPE funds; HOME funds; California Rental Housing Construction Program; California Housing Finance Agency programs.

DEBT FINANCING, such as issuance of tax-exempt bonds and the refunding of bond issues, remains a feasible funding source. The City continues to encourage issuing bonds on behalf of affordable housing projects. The County as well as non-profit corporations have the capacity to issue bonds. In addition, the LOW INCOME HOUSING TAX CREDIT is available to attract investors to support new construction efforts.

CONVENTIONAL FINANCING is also a potential source, particularly given the recent decrease in interest rates. The FEDERAL HOME LOAN BANK offers subsidy programs to banks that make loans to affordable housing developments (such as the Affordable Housing Program). This assists projects in attracting loans from conventional lenders. In addition, the recently-formed ORANGE COUNTY AFFORDABLE HOUSING CLEARINGHOUSE assists in matching lenders with proposed developments.



## FIGURE C-24 (Cont.)

### RESOURCES FOR PRESERVATION

The primary source of rent subsidies for Irvine residents is the federal **SECTION 8 CERTIFICATE AND VOUCHER PROGRAM**, available through the Orange County Housing Authority. Resources in this federal program are limited. Therefore, the additional certificates and vouchers that would be needed to continue affordable rents for Irvine residents may not be available as that need occurs.

To assist homebuyers, the City may participate in a **MORTGAGE CREDIT CERTIFICATE PROGRAM (MCC)**. An MCC provides a homebuyer a tax credit which can be deducted from their taxable income, thus increasing available income to purchase a home.

None of the 1,049 affordable units have been provided under the HUD Section 221(d)3 or Section 236 programs, and therefore none are eligible for incentives currently available per the Low Income Housing Preservation and Resident Homeownership Act of 1990 to extend the affordability.

**NON-PROFIT HOUSING ORGANIZATIONS** offer more resources for the preservation of affordable housing units. Non-profit organizations can issue tax-exempt bonds. They are also eligible to receive CDBG funds and other special housing funds. As such, non-profit organizations are in a position to initiate or support affordable housing projects.

The Orange County Community Housing Corporation, a county-wide non-profit organization, has completed a number of new construction affordable housing projects throughout the county. In addition to new construction, OCCHC carries out its own property management. Irvine Housing Opportunities (IHO) and Jamboree Housing Corporation (JHC) are smaller organizations now looking to expand their operations and capabilities. IHO developed and currently manages 150 units of senior housing, funded under the HUD Section 202 program. JHC is newer and in the process of undertaking its first projects. Both organizations are interested in assisting in efforts to preserve and/or replace at risk units. Some technical assistance may be necessary to help these non-profit organizations increase development capabilities and property management capacity.







## CIRCULATION ELEMENT

This element describes the nature and extent of the existing circulation network, and identifies trends, issues, and public policies relating to the development of a balanced, multi-modal circulation system for the City. The Circulation Element is a required element of local general plans (California Government Code 65302(b)).

### Description of Circulation

The circulation system is one of the most important of all urban systems in the planning area. A well planned circulation system is an important ingredient in a healthy economic environment.

The City's circulation system is illustrated in two Figures (i.e. D-1 and D-5) which address specific characteristics of the street network within Irvine and its Sphere of Influence. Figures D-1 and D-5 represent two different hierarchies of street systems. Figure D-1 addresses specific characteristics of type of use intended for the streets in Irvine; for example restricted access, parking prohibitions, or the types of traffic utilizing the street. On the other hand, Figure D-5 primarily defines the number of lanes a particular roadway has.

Circulation systems can be used to influence the nature and extent, as well as the pace of urban development. The viability of each land use is dependent upon a certain level of accessibility. The circulation system can be designed to respond to conservation, noise and air pollution, and wildlife preservation objectives. The circulation system can also be planned to satisfy social and urban design objectives. The physical aspects of the circulation system, including the roadways, can be used to foster communications among planning areas. Also, they can be planned to reinforce the boundaries of areas and to give a sense of orientation while traveling.

In the jurisdiction and its adopted sphere of influence, four different types of systems compose the entire circulation system, as follows:

#### 1. Air System

The air system is comprised of general aviation and commercial flights from John Wayne Airport, military operations from Marine Corps Air Station (MCAS) El Toro, and helicopter flights from MCAS Tustin. MCAS El Toro is the only airport facility actually located in a planning area (P.A. 51).

#### 2. Road System

The road system provides for nearly all passenger trips through and within the planning area. While the primary road user is the automobile; bicycles, pedestrians, and buses also use the road system. The planning area is served by a hierarchy of roads, as shown in Figure D-1 and Figure D-5, and defined in the Standards section of this element.



### 3. Public Transit System

The public transit system is comprised of four hierarchical transit corridors as described below and depicted in Figure D-4. The public transit network is designed to service regional and local travel needs. The City through its planning efforts encourages alternative transit modes such as light rail, monorail and other rapid transit systems, as well as providing opportunities for fixed rail commuter systems.



CIRCULATION  
ELEMENT










CITY OF IRVINE GENERAL PLAN

EXHIBIT D-1

NOTE: Additional interchange locations for Transportation Corridors to be determined

## CIRCULATION

-  Freeway   
  Interchange  
 Transportation Corridor  
 Expressway  
 Thruway  
 Parkway  
 Collector

- Regional Transit Corridors - These transit corridors are to be implemented by the Orange County Transit District, Orange County Transportation Commission or other regional transit agencies, and are envisioned to be serviced by an at-grade, line-haul advanced transit facility.
- Inter-City Public Transit Corridors - These are secondary transit corridors which provide connections between Irvine and other destinations, serving both inter- and intra-city traffic. The corridors are envisioned to be served predominantly by rubber-tired vehicles (bus, tram). Infrastructure alternative improvements such as exclusive lanes (HOV Lanes) may also be utilized.
- Intra-City Public Transit Corridors - These are local public transit corridors, serving major villages and districts, providing a feeder system to the inter-city and regional transit systems. The systems envisioned to serve the corridors are low volume transit facilities (i.e., bus, tram, people mover, dial-a-ride) operating within the available public right-of-way.
- Intra-City Advanced Transit Corridor - These are corridors which connect to the regional transit system to serve both inter- and intra- city travel needs. The corridors entail the maximum usage of overlapping or multi-purpose right-of-ways, including primarily the San Diego Creek and Peter's Canyon Wash drainage right-of-ways, as well as utility easements, village edge buffers, arterial parkways, safety lanes, or similar open space areas, as appropriate to preserve the opportunity for implementing a future advanced transit system. This system is envisioned to be served by an elevated, grade-separated transit facility.

#### 4. Trail System

The trail system is made up of bicycling, hiking, and equestrian trail corridors. These systems provide recreational and commuter opportunities. The bicycle trail corridors, as depicted in Figure D-2, provide access to parks, shopping centers, employment areas, and public facilities, and include both off-street (Class I) and on-street (Class II and III) trails. The hiking and equestrian corridors, as depicted in Figure D-3, provide recreational opportunities through major conservation and open space areas.

#### Existing Conditions

##### 1. Air System

Most of the air transportation needs of Orange County are met by John Wayne Airport. The flight schedules of local airlines are regulated by the County to minimize air and noise pollution impacts.

##### 2. Road System

The existing circulation system consists of a well developed road network within built-out areas. Travel by automobile accounts for nearly all of the short- and long-range ground passenger trips. Most existing developments in Irvine are primarily based upon the use of the automobile to satisfy travel requirements and provide limited or no major alternatives to the automobile in the design of their circulation system. At present, all highways in the planning area cross Santa Fe Railroad at grade level, causing some circulation conflicts.



Within the subregion of Southeast Orange County (inclusive of Irvine and adopted Sphere of Influence), the Southern California Association of Governments (SCAG) and South Coast Air Quality Management District (SCAQMD) recommend a two-pronged strategy for areas that are experiencing jobs-to-housing concerns. Specifically, the jobs-to-housing concerns affect the ability of local and regional agencies to coordinate land use intensities and corresponding circulation infrastructure plans.

As such, the two components recommended by these agencies center on regional transportation improvements and housing/employment balance. These components are part of the overall strategy for reducing the length of commute trips and for improving circulation capacity.

### 3. Public Transit System

At present, practically all transit operations are designed to handle inter-city travel requirements. Inter-city bus systems operate primarily along the Santa Ana and San Diego Freeways, with most having no stops in the planning area. Orange County Transit District (OCTD) provides bus service to major destinations within the planning area.

Amtrak operates on the Santa Fe Railroad right-of-way through the planning area. Existing stations are located in Irvine, San Juan Capistrano and Santa Ana.

### 4. Trail System

Bicycle trails have been developed along the majority of the designated corridors, connecting the developed areas of the City. A master plan for the hiking and equestrian trails has been adopted by the City.

## Trends

The Circulation Element provides support for the built and natural environments anticipated by land use patterns and building intensities. As the City matures, the City must coordinate development and infrastructures requirements. As such, circulation improvements must be planned to keep pace with development.

### 1. Air System

Increasing commercial passenger demand in Orange County will probably not be totally accommodated at John Wayne Airport due to numerous environmental and political constraints. The military has demonstrated strong opposition to any commercial use of their facilities or any possible relocation of their facilities. The military does not foresee any change in their operations in the near future. Therefore, it can be assumed that the existing air system will remain at a status quo.

### 2. Road System

Due to the large capital outlay already spent and future outlay anticipated, it can be assumed that the automobile will continue to be an important transportation mode. Recognizing the role of the automobile, the City through its planning efforts correlates the circulation network (Figure D-5) with General Plan land use intensities (Figures A-4 through A-10). As such, the City utilizes a computer traffic model to assist in analyzing proposed land use changes.

In order to ensure the proper use of the model, the City through Objective D-1 (h) and Objective A-1 reviews and updates the land use assumptions, traffic generation rate and other factors utilized in the computer model. Also, transportation demand management measures (i.e., ride sharing, flexible work hours, telecommunicating, etc.) are significant methods intended to reduce vehicular demand rather than increasing system capacity and are closely coordinated with the City's computer model.

Additionally, the City is transitioning to a well defined and established urban center. As a transitioning City, the City must plan for a doubling of its residential population and tripling of its employment population. As such, jobs-to-housing relationships will play an important part in understanding circulation impacts from development.

If development trends (jobs-to-housing imbalances) continue without effective transportation demand measures, and coordination of alternative transit systems, the planned roadway capacities may be exceeded.

### 3. Public Transit System

Opportunities still exist within the planning area for multi-modal transportation planning. Public transit should become an increasingly viable transportation mode as operating costs for private autos increase, roadway congestion increases, and lack of accessibility to private autos for certain groups (i.e., elderly, handicapped, low income) increases. While public transit may never supplant the automobile as the primary mode of transportation, its implementation and use will help alleviate street congestion, as well as provide a more economical means of transportation.

### 4. Trail System

It is expected that the bicycle trails will continue to be developed concurrent with adjacent development. The hiking and equestrian trails will also be developed as the City grows.

### Identification of Issues

As the City matures, it will need to address the following issues:

1. Proper staging of land use development can avoid overtaxing the road system capability locally, but regional development also effects traffic levels in the planning area. How can the City plan for a vehicular circulation system which accommodates both projected local and regional land use and circulation needs?
2. Vehicular circulation systems can have substantial environmental impacts on adjoining land uses. How can the City reduce, eliminate, or mitigate these negative environmental impacts?
3. The City has expended large sums of money in road construction to provide relative flexibility for automobile use. This has encouraged consumer preferences for the automobile, over alternative modes of transportation (bicycles, walking, public transit). How can the City encourage the use of a more balanced multi-modal circulation system?



4. Public transit should become an increasingly viable mode of transportation. How can the City preserve the opportunity for future advanced rapid transit?
5. There are both positive and negative impacts associated with air facilities. How can the City maximize the positive aspects, while minimizing the negative impacts of the air facilities adjacent to and within the planning area?
6. To provide adequate circulation capacity, the City should maintain a functional mix of land uses and an adequate relationship between housing and employment opportunities. How can the City provide an adequate jobs-to-housing balance?
7. Alternative transit modes such as light rail, mono-rail and other rapid transit systems as well as fixed rail commuter systems are becoming more important as the circulation network nears capacity. How can the City enhance alternative transit modes?

#### Response to Issues

In response to the previously identified issues, this section describes the following: 1) the General Plan framework for the Circulation Element; 2) the Circulation Element diagrams; and 3) specific circulation goal, objectives and implementing actions to manage and coordinate circulation improvements and systems. Together these components establish the framework to correlate circulation requirements with land use building intensities, and coordinate existing and future land uses with a consistent circulation system.

##### 1. General Plan Framework:

The Circulation Element, diagrams, and Goal, Objectives and Implementing Actions provide an overall short-term and long-range implementation strategy for the circulation needs of the community. As such, the Circulation Element is based on a multi-modal circulation system.

For example, the Circulation Element addresses the above identified issues:

1. An important circulation issue is the correlation of the Land Use Element building intensities with Circulation Element capacity. It is the intent of the General Plan to maintain a balance between land use building intensities (i.e. Figures A-4 through A-10) and their associated traffic demands with the Circulation Element's ultimate system. Tests of this balance (i.e. correlation) are conducted at the major stages of the development review process described below.

The City and its sphere are divided into "planning areas" which serve as one of the major means to control and measure implementation of the General Plan.

The Land Use Element establishes maximum residential dwelling units and nonresidential square footage for each planning area. Using these maximums, the ultimate circulation system is tested to determine if it can accommodate the traffic demand that may be generated at their buildout. It is a goal of the General Plan that specific standards for level of service will be achieved at buildout of the Land Use and Circulation elements.



If the level of service standards cannot be met, development intensities must be redefined, or mitigation measures must be provided, or other City objectives must be identified as overriding.

A concept plan or zone change is required for each planning area consistent with the intensity maximums specified in the Land Use Element. At this stage of the review process, additional testing is done to evaluate and coordinate the phasing of development with the construction of circulation system improvements.

To finance implementation of the Circulation Element, the City uses the following mechanisms: developer fees and exactions, assessment districts, Systems Development Charge, State and Federal funding, and the construction of circulation improvements as a condition of approval for new development.

The combination of a) maximum land use intensities, b) levels of service standards, c) successive levels of development review, d) requirements for phasing development with circulation improvements, and e) mechanisms to finance implementation of circulation improvements represent the correlation of the Land Use and Circulation Elements.

2. Circulation Element Objective D-2 (Roadway Design) and implementing actions establish criteria for siting circulation systems in an environmentally sensitive manner.
3. Circulation Element Objective D-3 (Pedestrian Circulation), Objective D-4 (Bicycle Circulation), Objective D-5 (Trail Networks), Objective D-6 (Public Transit Program), and Objective D-7 (Rapid Transit Program) and corresponding implementing actions establish a multi-modal circulation system which encourage alternative modes of transportation over the automobile.
4. Circulation Element Objective D-6 (Public Transit) and Objective D-7 (Rapid Transit Program) and corresponding diagram (Figure D-2) establish criteria for and graphically depict Intra-City Advanced Transit Corridors, Inter-City Public Transit Corridors and Intra-City Public Transit Corridors.
5. Circulation Element Objective D-8 (Air Transportation Program) and implementing actions establish criteria for air transportation facilities adjacent to the City of Irvine (i.e. John Wayne, El Toro MCAS and Tustin MCAS) and regional facilities.
6. Circulation Element Objective D-1 (Roadway Development) and implementing actions, as well as the policies and standards section, establish criteria for monitoring land use development and housing needs, circulation capacity standards, and correlation of the circulation network with building intensities.
7. Circulation Element Objective D-6 (Public Transit) and Objective D-7 (Rapid Transit Program) and corresponding implementing actions provide guidelines for developing and coordinating alternative circulation modes.

## 2. Circulation Element Diagrams:

The Circulation Element diagrams (Figures D-1 through D-5) provide guidance for siting and locating appropriate transportation facilities relative to land uses and

building intensities. Additionally, the Circulation Element diagrams graphically depict the extension of the circulation system to surrounding jurisdictions, thereby providing a regional perspective of the systems.

3. Circulation Element Goal, Objectives and Implementing Actions:

This section of the Circulation Element provides the criteria for coordinating and implementing the circulation systems.

GOAL D

CIRCULATION ELEMENT

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Provide a balanced transportation system.

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To achieve this goal, the City of Irvine has adopted the following objectives and implementing actions:



## OBJECTIVE D-1 ROADWAY DEVELOPMENT

Develop an integrated vehicular circulation system to accommodate projected local and regional circulation needs.

### Implementing Actions:

- a. Utilize the City of Irvine land use diagram and statistical tables (i.e. Figures A-4 through A-10) for the purpose of sizing basic circulation systems.
- b. The circulation networks illustrated in Figures D-1 and D-5 shall be used for the purpose of detailed planning. Additionally, computer modeling circulation network for buildout projections shall be consistent with the City's adopted Circulation Element as depicted on the Arterial Highway Map.
- c. Develop on an incremental basis a vehicular circulation system responding to local and regional access requirements.
- d. Evaluate the incremental additions to the system through utilization of the Irvine ITAP Model (Irvine Traffic Analysis Program). This model should be modified to evaluate all feasible forms of transportation, including public transit.
- e. Cooperate with state, county, and local governments for planning and implementing the Circulation Element and coordinating efforts to assure orderly development.
- f. Work with the County and The Irvine Company in developing compatible land use and circulation plans for the area northerly of the sphere of influence noting that development in this area can have a significant impact on the City.
- g. Planning and construction of public utilities - state, county, and local - should be coordinated to minimize negative impact on roadways within the City.
- h. Through the Development Monitoring Program (Objective A-1), monitor major land use and transportation planning issues in southeast Orange County for impacts on major transportation facilities in Irvine. The Development Monitoring program shall identify a list of intersections that do not meet the General Plan level of service standards for intersection capacity. The City shall monitor the planning and work with the County in developing mitigation measures.

- i. Through the Development Monitoring Program, ITAP Trip Generation Rates shall be evaluated and monitored. Any changes to the trip generation rates shall be analyzed to determine any effects, on the level of service standards of the Circulation Element of the General Plan and intersection capacity standards. This component of the Development Monitoring Program shall be reviewed by the Transportation Commission, Planning Commission and City Council.
- j. Support planning and development consistent with City policy for the San Joaquin, Eastern and Foothill Transportation Corridors.
- k. Actively lobby with appropriate State commissions, committees, and legislators for funding to upgrade the Newport, San Diego and Santa Ana Freeways, including the I-5/I-405 interchange.
- l. Support programs with the objective of increasing the vehicle occupancy rate (the Irvine Traffic Analysis Program (ITAP) assumes 1.1 persons per vehicle - home to work trip).
- m. The arterial links listed below shall be subject to further study to determine that the proposed augmentations, if necessary, are adequate to accommodate traffic demand at buildout of the General Plan. As part of any evaluation of an arterial augmentation proposal, travel demand reduction measures shall also be analyzed to determine if they can be implemented in lieu of augmentation. Arterial augmentations include improvements to signal timing or coordination, additional intersection through or turn lanes, auxiliary lanes, intersection grade separations, and eight lane Majors.<sup>1</sup>

Augmentation proposals, other than those that are operational in nature (e.g. signal timing, signal coordination and minor restriping), shall be evaluated and approved by the Transportation Commission and Planning Commission. Augmentation proposals related to a development case may be reviewed in connection with the processing of the development case.

The following list has been identified for further study as a result of the Conservation/Open Space General Plan Amendment (GPA-16).

Alton Parkway	Jeffrey Rd. to approximately 2,500 feet east
Alton Parkway	North-South Road to Sand Canyon Ave.
Ford Road	SJHTC to MacArthur
Laguna Canyon Road	SR-133 to Bake

Irvine Boulevard	Unnamed Arterial west leg of to ETC
Culver Drive	Main to Michelson
Sand Canyon Road	Alton to I-405
Bison	California to MacArthur
Barranca	Technology to ICD
Alton	Technology to I-5
Bake	Rockfield to I-5
ICD	Alton to Bake

Other arterial links not listed herein may be augmented as necessary in accordance with this implementing action.<sup>2</sup>

- n. Continue to work with the County of Orange, in a cooperative effort to explore the possibility of having Bonita Canyon Road connect with the San Joaquin Transportation Corridor rather than extending Culver Drive to connect with the corridor.
- o. Implement a traffic management program for the Irvine Business Complex (PA36) with a goal to reduce PM peak hour vehicle trips by 15 percent.
- p. Continue to work with the University of California at Irvine through their long range development plan to realign Culver Drive west along the University's property, in order to facilitate the extension of Culver Drive to the San Joaquin Hills Transportation Corridor, while minimizing environmental impacts to residential developments in Planning Area 21, adjacent to Culver Drive.
- r. Design roadways which ensure safe and efficient traffic flow while also encouraging adequate and convenient access to retail sites.
- s. Through the Development Monitoring Program, ITAP Trip Generation Rates shall be evaluated, with an analysis included that indicates the effect that recommended Trip Generation Rate changes would have on the level of service standards of the General Plan.
- t. Secure public support for the development of a balanced circulation system through a well organized public relations program.
- u. Absent any land use, building intensity and circulation infrastructure variations from the assumptions included in the IBC Program Environmental Impact Report (PEIR) 88-ER\_0087 and Traffic Study (Austin-Foust, August 1992), the responsibility for funding and achieving the area-wide circulation improvements as defined in this PEIR stay with



the IBC. It is recognized that if other planning areas within the City of Irvine are developed with the identified land use assumptions in the IBC PEIR, they will not be responsible for the funding and construction of IBC area-wide circulation improvements.

(1) ARTERIAL CAPACITY AUGMENTATIONS

<u>Improvement</u>	<u>Capacity Augmentation*</u>
o Signal Timing/Coordination	Up to 10%
o Additional right or left turn lanes	10% to 33%
o Additional through lanes at intersection	20% to 35%
o Auxiliary lanes	20% to 35%
o Eight lane major	33%
o Intersection grade separation (flyover)	100%

\*Effective operational capacity augmentation may be significantly less due to variations in intersection traffic flow patterns.

(2) Augmented capacity methodology is detailed in the City of Irvine Conservation/Open Space Traffic Study prepared by Austin-Foust Associates, Inc. (See Appendix A, EIR 82-GA-0016).

## OBJECTIVE D-2 ROADWAY DESIGN

Develop a vehicular circulation system consistent with high standards of transportation engineering safety and sensitivity to adjoining land uses.

### Implementing Actions:

- a. Roadways should be routed in careful relationship to adjoining land uses to minimize noise and visual impacts.
- b. Consider in the planning and design of highways other circulation networks recommended in this element (i.e. Figures D-2, D-3 and D-4).
- c. Wherever feasible, roadways should follow the natural terrain and the least environmentally damaging routes, particularly in hillside areas.
- d. Design roadways so as to provide appropriate mitigation of vehicle noise through use of items such as:
  - Physical barriers, such as berms which would permit residential units to be effectively screened from excessive noise; and
  - Semi-depressed roadways, in conjunction with berms and belts of trees, where feasible.
- e. Consistent with the City's Noise Performance Standards, utilize a variety of noise attenuation measures such as building placement, building insulation and berms to achieve solutions to roadway noise.
- f. Discourage through traffic in residential neighborhoods.
- g. Reduce the negative environmental impact of the automobile and indicate in all proposed developments how the negative impact of the automobile has been minimized.
- h. All open parking areas should be visually broken up by landscaping or other means to avoid visual monotony. Utilize trees in parking areas to reduce heat gain related to paved surface areas.
- i. Parking shall be prohibited on all thruways, parkways, and community collectors to increase the traffic capacity of these arterials.
- j. Properly space and interconnect traffic signals in order to minimize the number of traffic signals, and minimize the

acceleration/deceleration that produces significantly higher vehicular emissions and noise levels.

- k. Traffic control device systems shall be understandable, attractive, simple, uniform, and visible.
- l. Implement Transportation Management Plans developed for Irvine Industrial Complex (Spectrum) and Irvine Business Complex.
- m. The City shall continue to monitor Irvine Business Complex (IBC) traffic. This is a mutual effort of the affected agencies (e.g. Caltrans, Orange County Transportation Commission, etc.) to develop solutions to the IBC traffic problems.
- n. Periodically evaluate the impact of increases in San Diego and Santa Ana Freeway traffic on utilization of parkways in the east-west activity corridor.
- o. Southerly of the Santa Ana Freeway major intersections (those with arterial highways) with Jamboree Boulevard and MacArthur Boulevard may require special design treatment to increase vehicular capacity.
- p. Within UCI (PA50) and University Town Center (PA24) development proposals shall be reviewed for minimizing their impacts on the operation of the intersection of Culver Drive and Campus Drive.
- q. Develop regulations limiting the routes, speeds, and operating hours of vehicles generating noise nuisances, such as certain types of trucks and buses.
- r. At the time Campus Drive is proposed to be improved to its General Plan designation, require environmental studies that consider alternative roadway designs (e.g. bridge) to at grade level designs, to ensure that the ecologically significant adverse biotic impacts are avoided, or mitigated to a level of insignificance.
- s. At the time California is proposed to be improved to its General Plan designation, require environmental studies that consider alternative roadway designs (e.g. bridge) to at grade level designs, to ensure that the ecologically significant adverse biotic impacts are avoided, or mitigated to a level of insignificance.
- t. Visually enhance roadways through landscaping techniques and planting of trees.



- u. Yale Avenue between University Drive on the south and Yale Loop on the north shall be listed on the General Plan Operational Characteristics diagram as a "collector" and as a "commuter" (two lane roadway) on the Arterial Highway Designation diagram. The cross section of Yale Avenue across the San Diego Freeway shall provide for two travel lanes (one in each direction), bicycle lanes and sidewalks. The roadway may widen to meet the existing cross section of Yale Avenue at the Michelson and University intersections. The existing roadway between Yale, Michelson and University may be narrowed, or a median installed, to limit the roadway to two lanes, plus turning lanes.
- v. Yale Avenue between Deerfield Avenue on the south and Edgemere Avenue on the north shall be listed on the General Plan Operational Characteristics diagram as a "collector" and as a "commuter" (two lane roadway) on the Arterial Highway Designation diagram. The cross section of Yale Avenue across the AT&SF railroad shall provide for two travel lanes (one in each direction), bicycle lanes and sidewalks. The roadway may widen to meet the existing cross section of Yale Avenue at the Deerfield and Winvale intersections.
- w. Yale Avenue between University and Yale Loop will be constructed with noise walls (where needed) so that no residences along Yale Avenue between Yale Loop and University are exposed to noise levels in excess of City standards.
- x. Yale Avenue between Deerfield and Winvale will be constructed with noise walls so that no residences along Yale Avenue between Irvine Center Drive and Walnut Avenue are exposed to noise levels in excess of City standards.
- y. Yale Avenue between Deerfield and Winvale shall be landscaped such that off site views of the project are mitigated to City standards.
- z. Prior to opening Yale Avenue between Deerfield and Winvale, traffic signals shall be installed at the intersection of Yale and Deerfield.

### OBJECTIVE D-3 PEDESTRIAN CIRCULATION

Establish a pedestrian circulation system to support and encourage walking as a mode of transportation.

#### Implementing Actions:

- a. Villages shall contain an internal system of trails linking schools, shopping centers, and other public facilities with residences.
- b. Convenient and direct pedestrian walkways shall link the City.
- c. Design and locate land uses to encourage access by non-automotive means.
- d. Shopping areas will be located and designed to encourage pedestrian access.
- e. Pedestrian access from the interior of villages to public transit stops should be direct and convenient (see Objective D-6 implementing action f).

#### OBJECTIVE D-4 BICYCLE CIRCULATION

Link the City by a system of bicycle lanes and trails and encourage the use of the bicycle as a safe and convenient mode of transportation.

##### Implementing Actions:

- a. The City shall utilize the bicycle corridors shown in Figure D-2.
- b. Principal trip destinations such as schools, parks, community centers, and shopping centers shall be linked to residential areas.
- c. All bicycle trip destinations, including schools, shopping areas, and transit stops, shall be equipped with bike racks.
- d. Each village within the City shall contain a system of bike trails, both on- and off-street, to meet local demand. The trail system shall meet the demands both of the recreational and experienced cyclist.
- e. The City shall create a system of bicycle lanes within the street right-of-way to meet the needs of both the local and commuter cyclist. The lanes shall be designed for the safety of the cyclist.
- f. Adequate traffic control devices shall be provided for bicycle crossing.
- g. Traffic signal phasing shall be adequate for bicycle turning and straight-through movements.
- h. Off-street bicycle trails should use open space spines, flood control, and utility easements where possible. Such trails shall minimize automobile cross traffic.
- i. Require provision of village level bikeway systems by developers and their connection with the city-wide bicycle network.
- j. Trails will be continuous through the villages, matching desired trip routes.
- k. The City shall require the applicants of new developments to submit, at the time of tentative tract map submittal or conditional use permit or master plan review, pedestrian, and bicycle circulation plans detailing such access to the

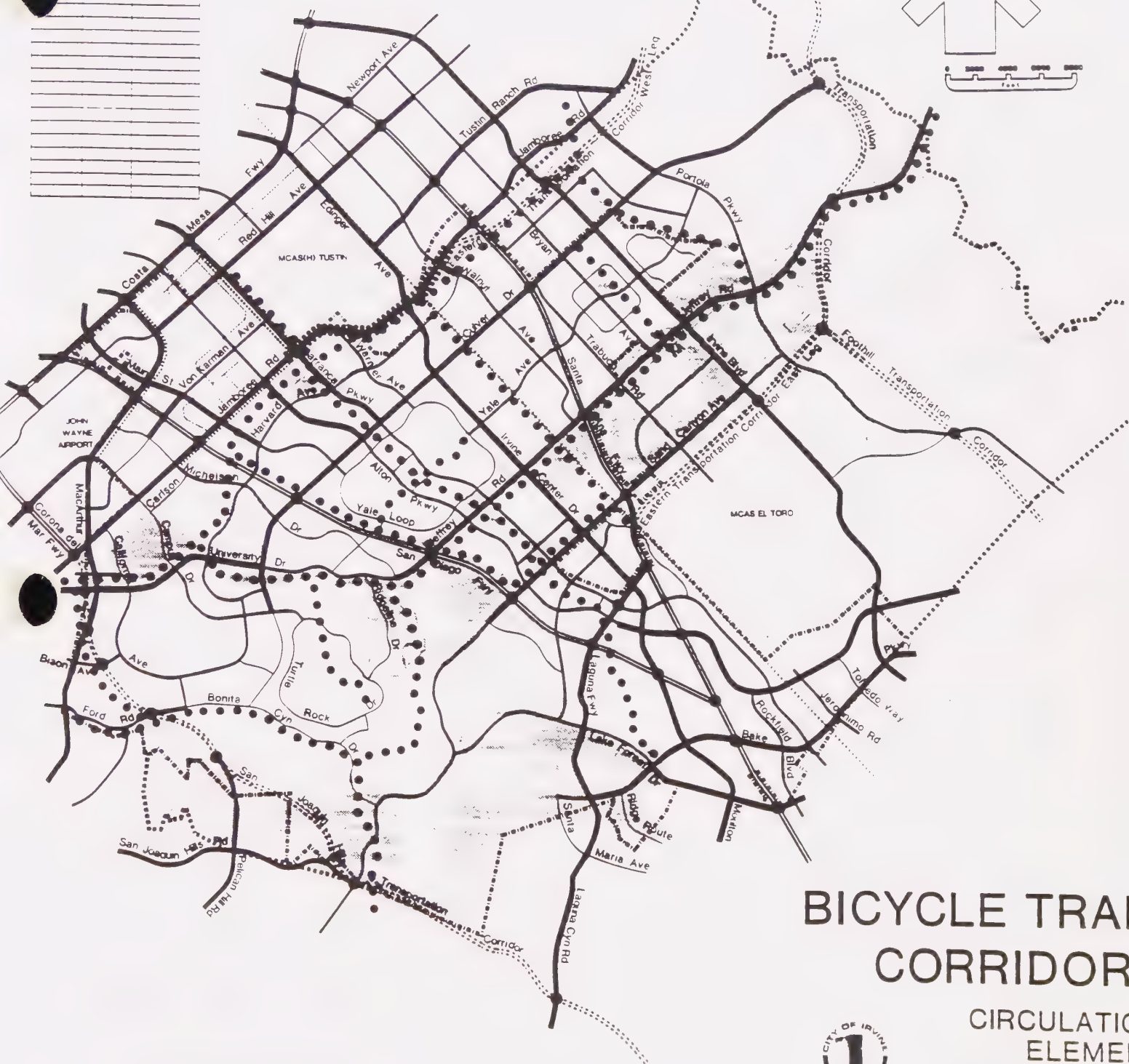


subject and adjacent properties in accordance with the Land Use, Conservation and Open Space, Urban Design and Circulation Elements of the General Plan.

- l. Include sites which are appropriate for educational or recreational purposes as part of the bikeway system, or included as an integral part of either public or community facilities.
- m. Initiate and monitor bikeway demonstration programs within existing villages and at UCI.
- n. Conduct a comprehensive public information program to increase public awareness of bicycle safety.
- o. Develop appropriate criteria to determine the adequacy of bicycle commuter facilities including but not limited to the provisions of showers and bike racks. The criteria will be applied to new commercial and industrial developments.
- p. In order to provide for increased safety and efficiency of the City's bicycle trail systems, design grade separated crossings at major intersections wherever possible.

Revisions

File	D.	Resolution No.
27	7W	89-145



# BICYCLE TRAIL CORRIDORS

CIRCULATION  
ELEMENT

CITY OF IRVINE GENERAL PLAN

EXHIBIT D-

NOTE: Trail corridors are illustrative only and not indicative of precise alignments. Areas shown in grey are designated open space.

- • • • • Class I (Off-street) Trails

Class II (On-street) Trails on all streets shown on this exhibit except Barranca between Jamboree and Redhill and: **MacArthur between Jamboree Boulevard, northwest to city limits**

==== Transportation Corridors  
 ===== Freeways

## OBJECTIVE D-5 TRAIL NETWORKS

Design and develop a trail network and support facilities (i.e., rest stops, staging areas, and centers) to satisfy the needs of equestrians and hikers; and coordinate linkages with other local, regional, state, and national trail systems.

### Implementing Actions:

- a. Provide for a trail system that can be monitored and phased to match the needs of the City as it grows.
- b. Locate equestrian and hiking trails in appropriate areas identified as permanent open space, scenic highway corridors, agricultural edges, public utility ROW's and easements, flood control channels, and areas designated for rural and estate density.
- c. Encourage the development of a trail system and support facilities that minimize the potential impacts on existing or planned urban development and on existing or planned wildlife preservation areas.
- d. Encourage the development of a trail system that will not create unsafe situations for users or residents of the City.
- e. At the time of precise alignment studies, and in conjunction with the required environmental assessments, City staff shall review trail proposals to determine the likelihood of potential impacts upon existing or planned development. Mitigation measures or alternatives will be implemented where appropriate and feasible.
- f. Motorized vehicles and cycles shall be prohibited from using the trail system.
- g. Encourage the location of equestrian boarding centers to provide easy access to the system.
- h. Equestrian boarding centers shall meet all minimum public health standards for food, shelter, and hygiene.
- i. Support facilities, such as rest stops, stalls, and boarding centers, shall be located away from higher density urban areas.
- j. The Irvine Equestrian and Hiking Trail Committee shall be established as a ongoing committee which shall monitor the needs and guide development of the equestrian and hiking



trail system in keeping with the Master Plan for Equestrian and Hiking Trails.

- k. The Master Plan for Equestrian and Hiking Trails shall include a precise plan of equestrian and hiking trails, identifying precise trail alignments, standards, priorities for development, and recommended support facility locations.
- l. Regulatory documents shall be revised to require developer dedication and final improvement of the trail alignments as shown in the Master Plan.
- m. The Master Plan for Equestrian and Hiking Trails shall depict the exact locations where equestrian/hiking trails and bicycle trails will share a common surface.
- n. In the Master Plan of Equestrian and Hiking Trails, provide a mechanism whereby City trails can be submitted for inclusion in Orange County's Master Plan of Hiking/ Riding Trails.
- o. The Irvine Equestrian and Hiking Trail Committee shall assist in the monitoring and seeking of funds for trail system development, improvement, and maintenance from all available sources.
- p. Ensure in Planning Areas 4 and 7 that an east/west trail connection to Hicks Canyon Trail (i.e. County of Orange Foothill Trail) is provided, per the City's Master Plan of Equestrian and Hiking Trails.
- q. Encourage the development of a staging area at the Animal Care Facility (Planning Area 12), for the purpose of securing the recreational viability of the equestrian and hiking trail that parallels the railroad tracts between Jeffrey and Sand Canyon.

[illegible]

NOTE: Trail corridors are illustrative only and not indicative of precise alignments. Areas shown in grey are designated open space


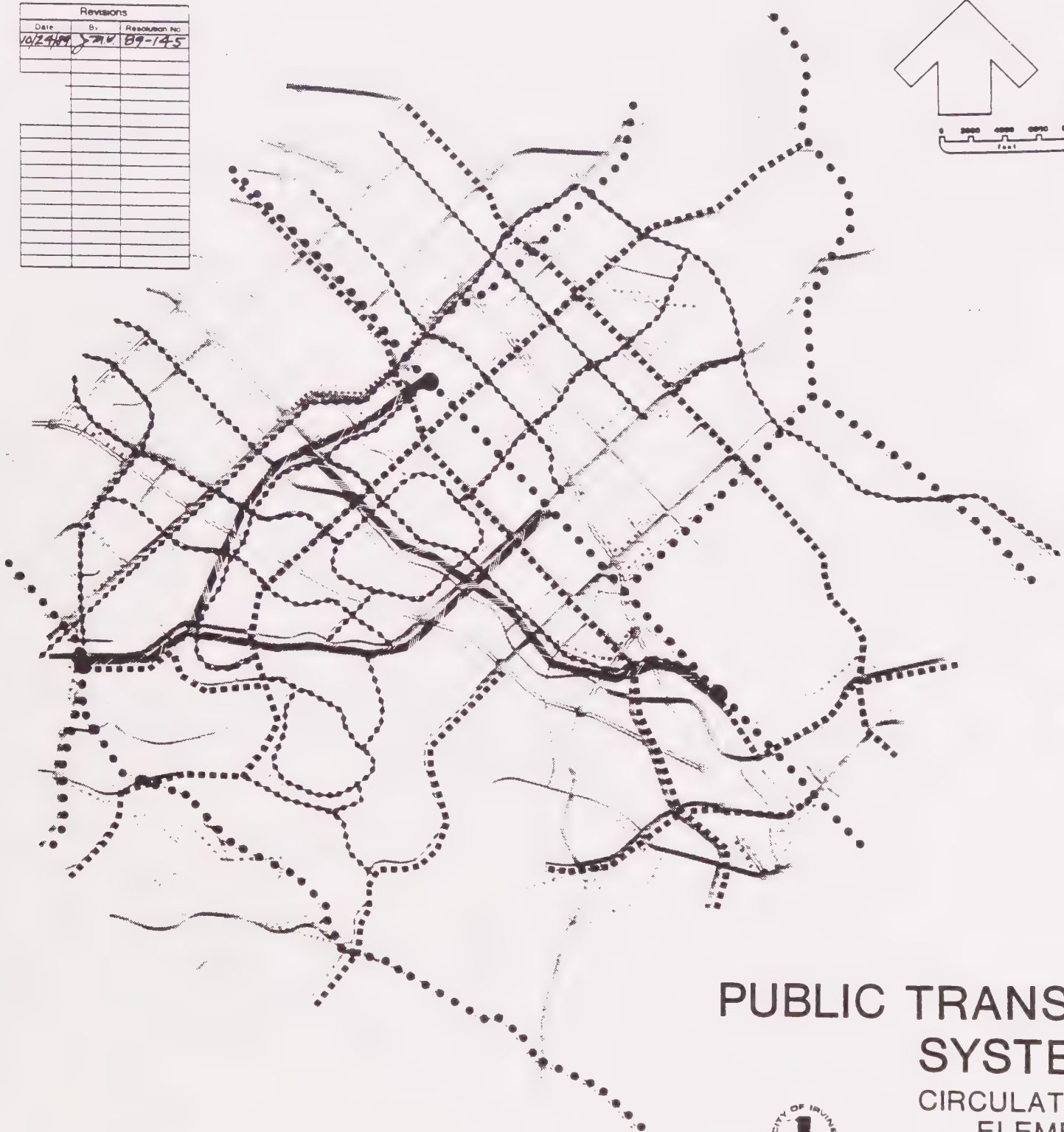
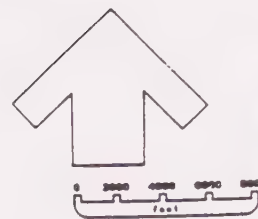
#### OBJECTIVE D-6 PUBLIC TRANSIT PROGRAM

Work with Orange County Transit District to implement a public transit system for trips within the City and adjacent areas.

##### Implementing Actions:

- a. Bus routes should provide a feasible alternative to the automobile and encourage public transit systems to these facilities.
- b. Provide bus service to existing land uses to maximize patronage.
- c. Plan residential, commercial, and industrial areas to enable effective use of public transit.
- d. Emergency parking lanes on arterial highways should be considered potential public transit corridors.
- e. Work with OCTD in pursuing additional transit service to the City as well as other Orange County cities.
- f. Pedestrian access from the interior of villages to public transit stops should be direct and convenient.
- g. Strive for reasonable and practical means through current technology to find transit solutions.



[illegible]

# PUBLIC TRANSIT SYSTEM

## CIRCULATION ELEMENT

CITY OF IRVINE GENERAL PLAN

EXHIBIT D-4



- Regional Transit
- Regional Intra-city Advanced Transit Corridor
- Inter-city Public Transit Corridor
- Intra-city Public Transit Corridor (Local Feeder)
- Transit Stop

● Transit Stop

## OBJECTIVE D-7 RAPID TRANSIT PROGRAM

Encourage the provision of advanced rapid transit capability.

### Implementing Actions:

- a. Undertake detailed planning of an advanced transit network (including local and activity center systems) encompassing the City and its Sphere of Influence as illustrated in Figure D-2.
- b. The City shall adopt a master plan of potential advanced intra-city transit routes.
- c. Coordinate the development of intra-county and regional transit stops with Irvine's intra-city transit system.
- d. Explore a full range of intra-city transit technologies in a detailed transit study.
- e. Plan commercial, industrial, and residential areas so that the use of transit systems could be implemented if and where deemed viable.
- f. Transit routes may be overlaid on village edges, parkways, safety lanes, flood control channels, and other open space where feasible. Exclusive transit rights-of-way may be required where no such overlay is feasible.
- g. Encourage the short-term use of rights-of-way reserved for the various circulation systems for other uses, such as recreational open space.
- h. The City shall require the applicants of new developments at the time of tentative tract map submittal or site plan review to indicate the precise location of transit routes and to justify transit overlays.
- i. Reserve AT&SF right-of-way for OCTD regional transit corridor.

## OBJECTIVE D-8 AIR TRANSPORTATION PROGRAM

Promote improved air transportation for Orange County while minimizing noise and air pollution.

### Implementing Actions:

- a. Coordinate public transit and local transit with planning for air transportation.
- b. Support expansion of service at John Wayne Airport as State noise and pollution standards are met and as vehicle traffic problems are reduced.
- c. Recognize the positive economic impacts which John Wayne Airport provides to the City.
- d. Oppose commercial use of El Toro MCAS and continue liaison with surrounding communities in organizing and supporting opposition to such use.
- e. Urge the Navy Department and the Marine Corps to minimize the noise, vibration and pollution impacts of their operation.
- f. Encourage use of Los Angeles and Ontario International Airports for continental and international flights.
- g. Develop, in cooperation with the City of Newport Beach, an activity center transportation system to alleviate the ground access congestion related to John Wayne Airport.
- h. Encourage the development of high speed ground transportation systems to supplement the air system for meeting inter-regional travel needs.



## POLICIES AND STANDARDS

### Level of Service Standards:

The following Level of Service (LOS) Standards shall be the goal applied to arterial highways, as shown in Figure D-5, which are in the City of Irvine or its sphere of influence, and which are under the City's jurisdiction.

LOS "E" or better shall be considered acceptable within the Irvine Business Complex (IBC-P.A. 36) and Irvine Center (P.A. 33).

LOS "D" or better shall be considered acceptable within all other areas.

Level of Service Standards are defined as follows:

Level of Service "A": The volume/capacity ratio ranges from .0 to .60. At this LOS, traffic volumes are low and speed is not restricted by other vehicles. All signal cycles clear with no vehicles waiting through more than one original cycle.

Level of Service "B": The volume/capacity ratio ranges from .61 to .70. At this LOS, traffic volumes begin to be affected by other traffic. Between one and ten percent of the signal cycles have one or more vehicles which wait through more than one signal/cycle during peak traffic periods.

Level of Service "C": The volume/capacity ratio ranges from .71 to .80. At this LOS, operating speeds and maneuverability are closely controlled by other traffic. Between 11 and 30 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.

Level of Service "D": The volume/capacity ratio ranges from .81 to 90. At this LOS, traffic will operate at tolerable operating speeds, although with restricted maneuverability.

Level of Service "E": The volume/capacity ratio ranges from .91 to 1.0. Traffic will experience restricted speeds, vehicles will frequently have to wait through two or more cycles at signalized intersections, and any additional traffic will result in breakdown of the traffic carrying ability of the system.

Level of Service "F": Long queues at traffic, unstable flow, stoppages of long duration with traffic volumes and traffic speed can drop to zero. Traffic volumes will be less than the volume which occurs at Level of Service E.

## Operational Characteristics Plan (Figure D-1)

Figure D-1 designates the operational characteristics of streets. It addresses specific characteristics of streets in Irvine, including restricted access, parking prohibitions, and the types of traffic utilizing the street. The functional classifications contained in Figure D-1 are defined as follows:

Freeway: A divided state highway with access restricted to grade separated interchanges. Freeways provide for movement of high volumes of inter-city traffic. See also definition under "Facility Types".

Transportation Corridor: A multi-modal facility with restricted access having a median of sufficient width to be utilized for fixed rail or high occupancy vehicle lanes, in addition to general purpose lanes. Transportation Corridors provide for movement of inter-city traffic. See also definition under "Facility Types".

Thruway: A relatively high speed arterial highway with restricted access supplementing the Freeway System and carrying intermediate range trips to or between major nonresidential land uses. A thruway has emergency parking only, and minimal pedestrian interference with traffic.

Parkway: A moderate speed arterial highway abutting and distributing trips to a variety of land uses. This facility primarily serves short-range trips and is a significant environmental element as it borders the activity corridor. A parkway has emergency parking only and will have considerable parallel and perpendicular pedestrian movement.

Community Collector: A medium speed highway abutting similar land uses. The primary function is to collect and distribute trips within a hierarchy of roads and, secondarily, to carry short trips between adjacent neighborhoods. A community collector has emergency parking only and has a significant amount of parallel and perpendicular pedestrian traffic. Two lane undivided roadways that exclusively provide for the collection or distribution of local traffic are defined as local roadways and are not shown in Figure D-1.

Local Street: A low speed, low volume highway primarily for access to residential, business, and other abutting property. A local street may have parking and a significant amount of parallel and perpendicular pedestrian traffic.

### Arterial Highways (Figure D-5)

Figure D-5 designates the type of facility. It primarily defines the number of lanes within a given roadway. The facility classifications contained in Figure D-5 are defined as follows:

Freeway: A divided state highway with access restricted to grade separated interchanges. Freeways provide for movement of high volumes of inter-city traffic.

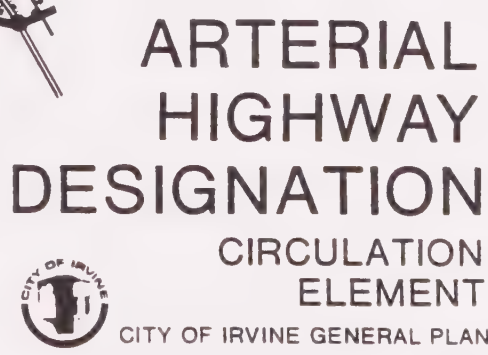
Transportation Corridor: A multi-modal facility with restricted access having a median of sufficient width to be utilized for fixed rail or high occupancy vehicle lanes, in addition to general purpose lanes. Transportation Corridors provide for movement of inter-city traffic.

Major Highway: A divided arterial highway of six to eight through lanes. Majors provide for: 1) the movement of inter-village through traffic; and/or 2) the distribution of traffic to and from Freeways or Transportation Corridors.

Primary Highway: A divided arterial highway of four through lanes. Primaries provide for: 1) the movement of inter-village traffic; 2) the movement of traffic to and from activity centers within villages; and/or 3) the distribution of traffic to and from Freeways or Transportation Corridors.

Secondary Highway: An undivided arterial highway of four through lanes. Secondaries provide for: 1) the movement of inter-village traffic; and/or 2) the movement of traffic to and from activity centers within villages.














CITY OF IRVINE GENERAL PLAN

## NOTES

1. Additional interchange locations for transportation corridors to be determined
2. Arterial designations may change at city boundaries. Please consult adjacent jurisdictions.
3. Harvard Avenue between Michelson Drive and University Drive is limited to two lanes and will not be constructed to four lanes due to environmental and right-of-way considerations. It should be noted that the intersections with Michelson and University are constructed to 4 lane Primary standards. Since no side friction occurs on this roadway segment the min. capacity is assumed to be greater than that of a City of Irvine Type 2 lane roadway and consistent with the guidelines in the 1985 Highway Capacity Manual.
4. The width of the Technology Drive/Irwin State 5 underpass may physically constrain the standard cross section of a secondary highway through the underpass.
5. As defined in the Circulation Element text Major Highways may have 6 to 8 through lanes. Major highways not currently shown as 4 lanes may be constructed as such without a General Plan amendment.
6. As defined in the Circulation Element text Commuter Highways provide for the collection and distribution of local traffic and are not depicted on this Circulation Element exhibit.

## CIRCULATION

-  Freeway ● Interchange  
 Transportation Corridor  
 Expressway  
 Major Highway  8 Lanes  
 Primary Highway  
 Secondary Highway  
 Commuter  
 Railroad

Commuter Highway: An arterial highway of two through lanes and an undivided median. Commuters provide for: 1) the movement of inter-village traffic, or 2) the movement of traffic to and from activity centers within villages. Two lane undivided roadways that exclusively provide for the collection or distribution of local traffic are defined as local roadways and are not shown in Figure D-5.

Related Objective Numbers

Land Use Element - A-2, A-4  
Urban Design Element - B-1  
Housing Element - C-3, C-5  
Scenic Highways Element - E-1, E-2  
Noise Element - F-1  
Public Facilities Element - G-1  
Safety Element - J-2  
Parks and Recreation Element - K-3









## SCENIC HIGHWAYS ELEMENT

Increased environmental awareness on the part of the public has led to a concern for developing highways which serve not only transportation needs, but also serve to facilitate the preservation of visually attractive natural and man-made amenities for the enjoyment of both motorists and other users and viewers alike. The Scenic Highways Element is an optional element which if included in local general plans must be implemented (California Government Code 65303).

### Description of Scenic Highways

Scenic highways are made up of the road and its right-of-way, and the scenic corridor. The scenic corridor is the visible area outside the highway's right-of-way, generally described as "the view from the road." The boundaries of the scenic corridor vary with the natural characteristics of the landscape as viewed by a motorist. Scenic highways provide recreational value for their visual relief as a result of nature or the designed efforts of man.

Planning areas, for the purpose of this element, contain two types of scenic highways-rural and urban. Rural scenic highways are routes in which natural scenic resources and aesthetic values may be found. Rural scenic highways traverse areas, such as agricultural or natural areas, which are protected and enhanced. Urban scenic highways are routes that traverse an urban area, with the scenic corridor offering a view of attractive and exciting urban scenes.

### Existing Conditions

Prior to the City's incorporation, efforts had been made to designate scenic highways in applicable planning areas. Studies were conducted by the State of California and the County of Orange to identify potential scenic highways. During development of the City's general plan, several roadways were designated and adopted as scenic highways. Figure E-1 depicts the City's scenic highway plan and designates the following roads as scenic highways:

- Culver Drive: A road combining views of rural and urban significance to both City and County residents, including the coastal, inland, and northern canyons and the University of California, Irvine (UCI).
- University Drive and Jeffrey Road: Roads combining views of rural and urban significance to both City and County residents, including Upper Newport Bay, San Joaquin Marsh, University of California, Irvine, Mason Regional Park, the Jeffrey Road Open Space Spine, and Preservation Areas.
- Sand Canyon Road: A road of primarily rural character providing views of the Pacific Ocean, coastal, inland and northern canyons and Irvine's open space preservation areas. It also has some significant stands of oak trees adjacent to it in the central flatlands area.
- Laguna Canyon Freeway: A freeway with a rural character related to Laguna Canyon.
- San Diego and Santa Ana Freeways: Primarily urban freeways providing views of significance to both City, County, State and National residents with views of the University of California at Irvine, Irvine Industrial Complex-East, Irvine Business Complex, Irvine Center the Jeffrey Open Space Spine, open space preservation areas, and Irvine's agricultural areas.



The scenic highways have been built out, either wholly or partially, within the flatland areas of the City. Substantial urban development has occurred along Culver Drive, Santa Ana Freeway (I-5) and the San Diego Freeway (I-405). Partial urban development has occurred along Jeffrey Road/University Drive and little or no development along Laguna Canyon Road. Within the City's hilly areas, no scenic highway development has occurred.

### Trends

Development of the City's scenic highways is anticipated to occur concurrently with development of adjacent properties. Since neither the State nor the County scenic highway programs fund development of highways, road build out is provided as the need arises. Development of scenic highways, therefore, will be completed first in the flatland areas of the City, with gradual completion of the system in the hilly areas as these areas are developed.

### Identification of Issue

1. The extent of undeveloped land can allow the City to preserve and enhance its scenic highway corridors through appropriate design guidelines and review processes. How can the City protect the scenic resources of the scenic highways?

### Responses to Issues

Irvine is unique in that the planning and development of scenic highways can be integrated into the City's overall development. Through this element, the City has adopted a Scenic Highway Plan, designating several roadways as urban or rural scenic highways. The following goal, objectives, and implementing actions have been adopted to facilitate the enhancement of these highways.



GOAL E SCENIC

SCENIC HIGHWAYS ELEMENT

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Preserve and enhance the visual, historic, and cultural aspects of the highway travel experience.

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To achieve this goal, the City of Irvine has adopted the following objectives and implementing actions:



## OBJECTIVE E-1 SCENIC HIGHWAY CORRIDORS

Define scenic highways and establish specific definitions of scenic highway corridors.

### Implementing Actions:

- a. Utilize Figure E-1 as the City's scenic highway plan.
- b. Define specific visual limits to the identified scenic highway corridors based on, but not limited to, the following criteria:
  - Topographic limits of significant view (e.g., canyon scenic highways).
  - Extent of view to significant landmarks (e.g., freeway views to UCI and Irvine Center).
  - Extent of view to edges of land uses which may define a corridor edge (e.g., El Toro edge to Irvine's agricultural area).

## OBJECTIVE E-2 DESIGN GUIDELINES

Develop design guidelines and review procedures for all users within the scenic highway corridors.

### Implementing Actions:

- a. Develop specific design guidelines and review policies related to the extent, height, character, and quality of development within the scenic highway corridors.
- b. Coordinate scenic highway planning with preservation and development of the conservation and open space plan, the recommended bicycle, hiking, and equestrian trails, and with transit corridors.
- c. Coordinate scenic highway planning and implementation with the County and State.

### Standards

(Reserved)

### Related Objective Numbers

Circulation Element - D-1, D-2, D-5  
Conservation and Open Space Element - L-4

### Compliance Regulations

City of Irvine Zoning Ordinance







## NOISE ELEMENT

The purpose of the Noise Element is to provide a summary of information and a statement of public policies regarding the maintenance of a quiet environment. The Noise Element is a required component of local general plans (California Government Code 65302f).

Description of Noise

Noise is unwanted sound which is considered unpleasant and bothersome. Noise has become a serious environmental problem because of its adverse effects on people and the environment. Every day people are exposed to various levels and sources of noise, which affects them physically and psychologically. People have much more difficulty in adjusting to this stress than is commonly believed. Researchers have found little evidence that people can adapt to noise easily. The most apparent physiological effect of noise is the temporary, or in some cases permanent, loss of hearing. Noise can disrupt or interfere with communication and disturb sleep. It can also decrease children's ability to discriminate among different sounds, which affects their learning ability.

In order to define noise, it is important to identify the physical characteristics of sound. Sound is the result of a sound source inducing vibration in the air. Sound has three variables: amplitude/loudness, frequency/pitch, and pattern of time.

Amplitude/loudness is the sound pressure measured in decibels (dB). Decibels are based on a logarithmic scale because the range of sound intensities is so great that it is convenient to compress the scale to encompass all the sounds needed to be measured.

Frequency/pitch is the rate at which a sound source vibrates or makes the air vibrate. The means by which it is measured is known as Hertz ( $H_z$ ), which is the number of cycles per second.

Pattern of time and level produces different sounds such as continuous (long periods at a constant level, e.g., waterfall); intermittent (short periods, e.g., aircraft takeoff); impulse (extremely short span of time, e.g., hand clap); fluctuating (variations in level over time, e.g., traffic sounds at a busy intersection).

The time when sound occurs contributes significantly to the objectionable nature of sound. Sound levels that normally occur during daylight hours and are not considered objectionable, may be excessive when they occur at night, a period when most people demand quiet.

Individual sounds can be expressed in terms of A-weighted decibels - dB(A). The A-weighted scale is a frequency dependent rating scale. It de-emphasizes the very low and very high frequency components, thus placing greater emphasis on sound frequency within the sensitivity range of the human ear. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). The average level of conversation ranges from 60 to 80 dBA. Sound becomes physically painful at 120 dBA.

Quantification of the noise environment over a period of time requires an additional method of description. There are a number of noise rating scales, the most common of

which is the Equivalent Noise Level (Leq). The Leq is the energy average of a fluctuating noise source over a specified period of time. The energy average (Leq) of each hour of the day, weighted for the more sensitive time periods within 24 hours, may describe the Community Noise Equivalent Level (CNEL) or Day Night Average (L<sub>dn</sub>). California Planning and Zoning Law, Section 65302(g) requires that general plan noise elements use either CNEL or L<sub>dn</sub> to describe and evaluate community noise levels. CNEL is commonly used by California local governments and is also used by the City. CNEL is a combination of the loudness, duration and time of occurrence of a noise event. Three time periods have been identified: 7 a.m.-7 p.m. for daytime, 7 p.m.-10 p.m. for evening, and 10 p.m.-7 a.m. for nighttime. During the evening hours, each hourly Leq is penalized by 5 dBA. Night Leq is penalized by 10 dBA.

The transmittal of sound involves three statistical components: source, transmission path, and receiver. Noise can be mitigated by treatment of any of the three components such as: reducing noise source, increasing the distance (path), or placing a barrier between the noise source and receiver, and insulating the receiver. The following are examples of these mitigation measures.

- |                        |   |
|------------------------|---|
| Fixed noise sources    | - A doubling of distance (transmission path) will produce a 6 dBA reduction in sound level.   |
| Transportation sources | - A doubling of distance (transmission path) will produce a 4.5 dBA reduction in sound level. |
|                        | - A row of two-story buildings will provide a reduction of about 10 dBA.                      |

### Existing Conditions

The most pervasive noise in Irvine, as in most other communities, comes from mobile noise sources, including motor vehicles, railroads, and aircraft. Three major freeways, one thru railroad line, and three airports expose the City to significant noise impacts, particularly in those areas adjacent to the freeways, major streets, railroad, or airports. Aircraft flight tracks in Irvine also impact particular areas of the City significantly. The City is also exposed to noise emanating from sources such as industrial and commercial activities, construction activities, and human activities.

Noise affects all types of land uses and activities, although some are more sensitive to high noise levels than others. The noise sensitive land uses include residential, convalescent and rest homes, hospitals, libraries, churches, and schools.

Noise is generated by numerous sources. For the purpose of this Noise Element, the City recognizes two major categories of noise sources, mobile and stationary.

#### 1. Mobile Noise Sources

Mobile sources are transportation-related (nonfixed) including motor vehicles, railroad, and aircraft. Motor vehicle noise is characterized by a high frequency of events, short duration, and proximity to areas sensitive to noise exposure. Rail transit and aircraft operations frequently generate extremely high noise levels which are disruptive to human activity. A technical report containing ground transportation noise data is included in the technical appendix to the noise element.



a. Motor Vehicles

Sources of vehicular traffic noise are automobiles, buses, trucks, and motorcycles. Noise is generated by engines, exhaust systems, transmissions, fans, tires, and air movement. The noise level is relatively constant around highways, but may vary near arterials and city streets.

The 60, 65, and 70 CNEL contours computed for existing vehicle traffic in Irvine are shown in Figure F-1. The noise contours incorporate the effects of topography and barriers such as walls, berms, and buildings. (For additional information, see the technical appendix to the noise element.)

b. Railroads

Railroad noise is the result of the mechanical processes of the engine, the interaction of the wheels with the track, and use of the horn. The amount of noise generated is dependent upon the speed of the train and the number of cars.

The Atchison, Topeka and Santa Fe (AT & SF) Railroad Line passes through the northern part of the City of Irvine in an east/west direction. The railroad operation includes 14 commuter trains (10 per day and 4 per night), and an average of 6 freight trains (4 per day and 2 per night). The number of freight trains depends on economic demand. There are also spur lines located in Northwood (Planning Area 8) IBC (Planning Area 36), and Irvine Industrial Complex-East (Planning Area 32). The noise generated by these spur lines is insufficient to provide CNEL contours in excess of 60 dB outside the right-of-way.

Figure F-1 illustrates the existing railroad CNEL contours. (For additional information see the technical appendix to the noise element.)

At present, 256 dwelling units are exposed to ground transportation noise levels over 65 CNEL (see technical appendix). This means that approximately 691 residents are impacted by noise levels in excess of the City noise standard. (Estimate based on an average of 2.1 pop/du).

c. Aircraft

Aircraft noise generally affects areas within the airport vicinity during takeoffs and landings, and areas located around the flight tracks. Airborne noise sources in Irvine include aircraft operations at MCAS El Toro, helicopter operations at MCAS Tustin, and civil air operations at John Wayne Airport.

The major aircraft noise source in Irvine is MCAS El Toro, which is located northeast of Irvine. Many noise studies have been conducted for MCAS El Toro operations over the past several years. The first MCAS El Toro noise study was completed in 1970 by the firm of Bolt, Beranek and Neuman (BB&N) and was updated in 1972. The BB&N noise contour map has been included in the City of Irvine's Noise Element since 1973.

The most recent noise study for MCAS El Toro was completed in August, 1979 by the Navy Aircraft Environmental Support Office (AESO), and adopted in 1981 by the Marine Corps as part of the Air Installation Compatible Use Zone

(AICUZ) Study. The noise levels for the AESO study were predicted by computer, based on noise characteristics of aircraft as measured by the military, and annual operations data (number and type of aircraft movements, and flight tracks) according to the Marine's records. The final position of the computed CNEL contours was verified by several site specific studies outside of Irvine. It is the City's position that additional studies should be conducted, with sites in Irvine, to verify these noise contours. However, until that is accomplished, the AESO noise contours represent the best information available, for planning analysis.

The noise from helicopter operations at MCAS Tustin also affects the City. The City presently uses the AICUZ noise contour map as depicted in the 1983 Master Plan, for MCAS(H) Tustin, for the assessment of the helicopter noise impacts.

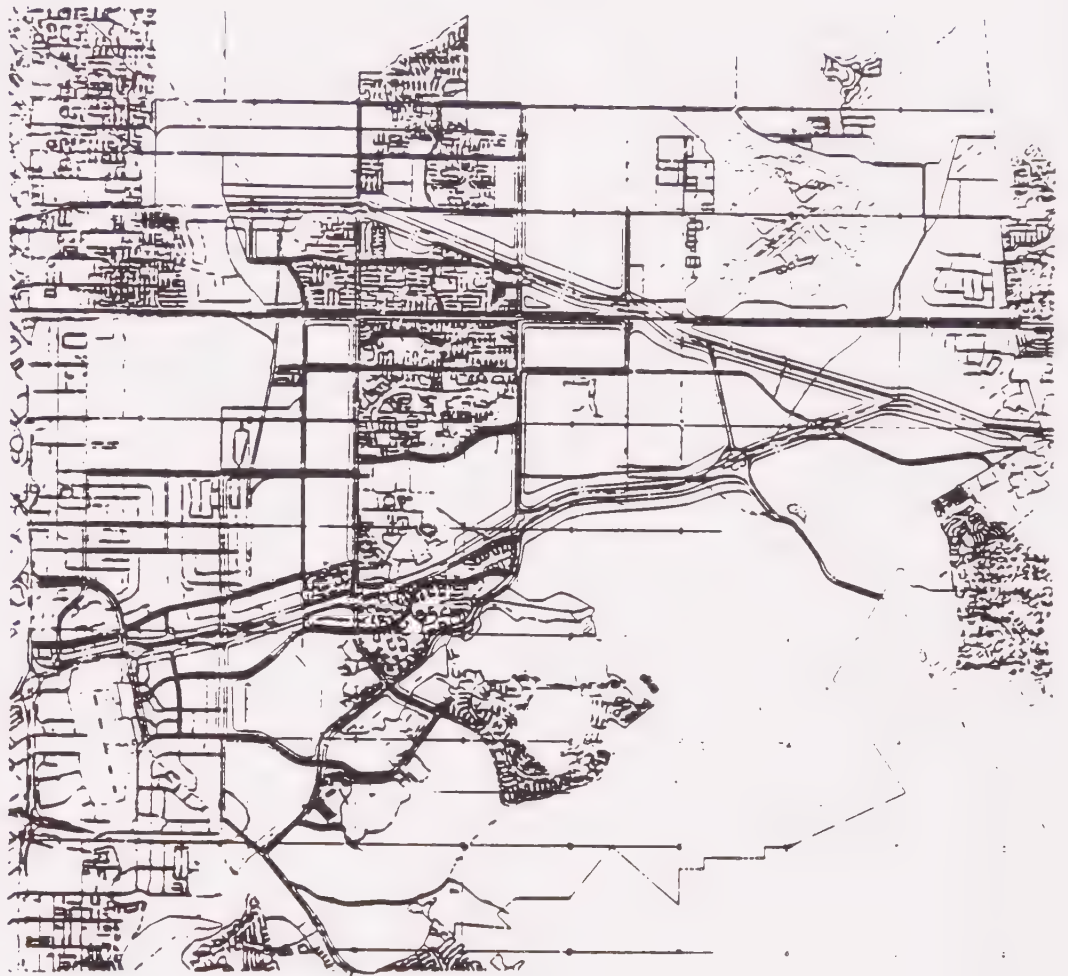
The John Wayne Airport noise contour map, developed by Wiley Laboratories in February 1975, is used for the assessment of aircraft noise impacts from John Wayne Airport. In accordance with state requirements, the Noise Abatement Center of John Wayne Airport, established in 1971, monitors the noise generated by airport operations and prepares a noise contour map annually. The Noise Element incorporates the 1980 noise contour map and the City will use the future annual updates of the noise contour map for planning analysis.

Figure F-2 illustrates the 1979 AESO noise contours for MCAS El Toro, 1976 MCAS Tustin noise contours and the 1980 John Wayne Airport noise contours.

The major aircraft noise impact on residential areas in the City is from MCAS El Toro. At present, approximately 264 acres of developed residential land is exposed to El Toro aircraft noise in excess of 65 CNEL. This means that approximately 6,600 residents are impacted by noise levels in excess of the City noise standard. In addition, 23 planned residential acres (within the City limits) are exposed to El Toro aircraft noise in excess of 65 CNEL. This means that approximately 575 people would be impacted by noise levels in excess of City noise standards. (Estimates based on General Plan residential land use densities and population figures.)

## 2. Stationary Noise Sources

Stationary noise sources are the noise sources in the community such as industrial and mechanical equipment, which are often referred to as "fixed sources." Industrial noise generated by processing and operation is usually of long duration at relatively low frequencies. Construction sources generate high noise levels for extended periods of time.



# EXISTING HIGHWAY/RAILROAD NOISE

— — — C.N.E.L. CONTOURS



FIG. F-1

FIG. F-1



The following are examples of stationary noise sources:

Mechanical electric equipment (air conditioners, refrigeration units, swimming pool and spa pumps and filters, air compressors, industrial plant machinery);

Various power tools (lawn mowers, leaf blowers, other gardening equipment);

Construction activities (construction, repair, remodeling or grading);

Commercial/industrial activities (truck pickup and loading, car wash facilities, industrial operations);

Animal noise (barking dogs); and

Human-related activities (loud parties, loud music, radio, T.V., children playing).

The City's existing Noise Ordinance establishes the maximum permissible noise level which may intrude into a neighbor's property. The Ordinance (adopted in 1975 and revised in 1984) establishes noise level standards (dBA) for various land use categories being affected by stationary noise sources. The Ordinance regulates the timing of construction activities and includes special provisions for sensitive land uses. Up to the present time, the City Noise Ordinance has been enforced in response to noise complaints.

## Trends

### 1. Mobile Noise Sources

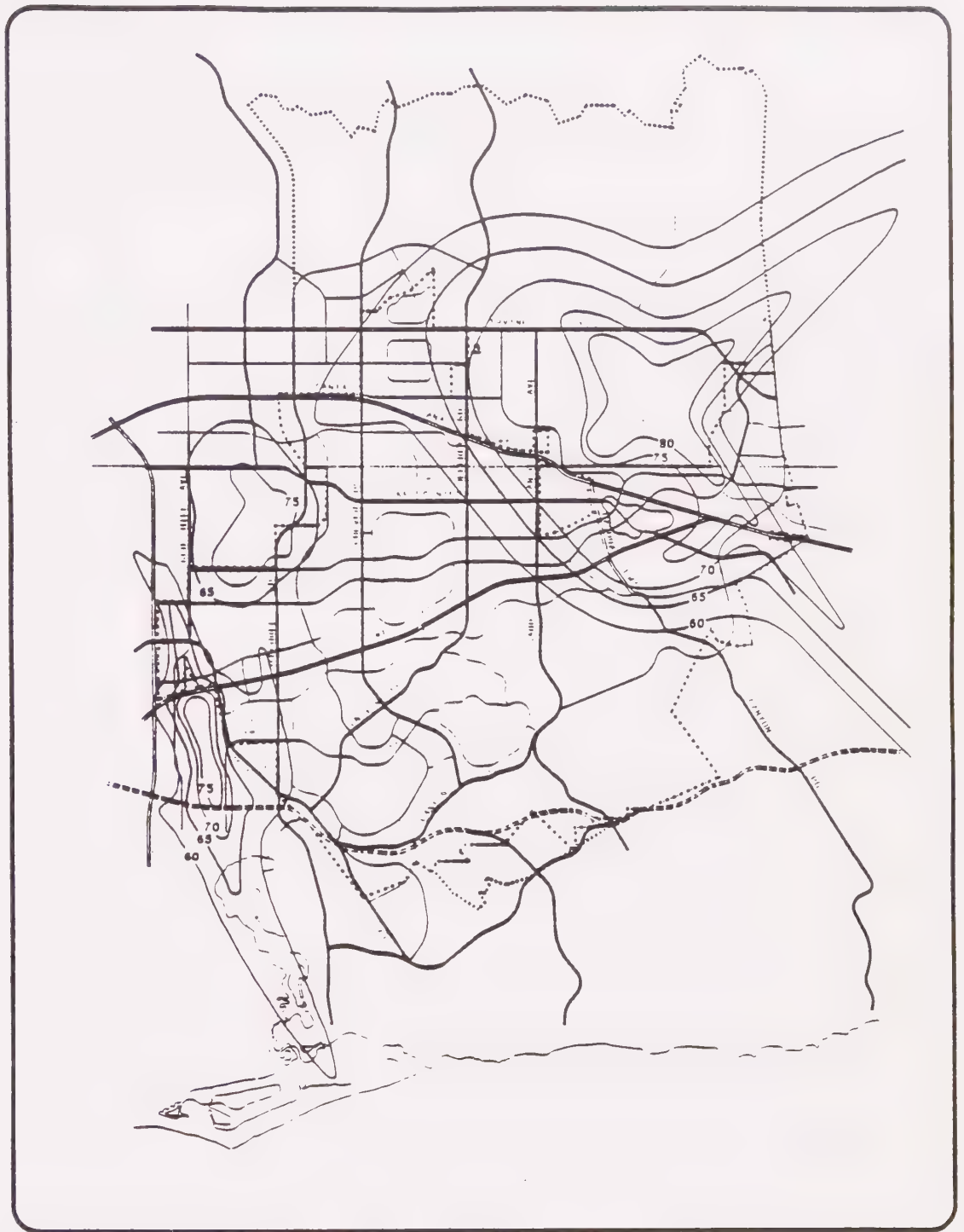
#### a. Motor Vehicles

Since the City is only partly developed, motor vehicle noise will continue to be significant even if each individual vehicle eventually meets state noise standards. An increased use of convenient mass transit systems may contribute to noise reduction. Future motor vehicle noise contours are shown in Figure F-3. (For additional information, see the technical appendix to the noise element.)

#### b. Railroads

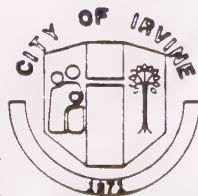
It is expected that over the years there will be gradual build up of railroad freight traffic. Any alternative mode of rail passenger travel such as commuter rail or bullet train might contribute to increased noise levels. Future railroad noise contours are shown in Figure F-3. (For additional information, see the technical appendix to the noise element.)

By the year 2000, an estimated 1,523 acres of undeveloped land (within the City limits) will be exposed to ground transportation noise levels over 65 CNEL. Approximately half of this amount is planned for residential development (760 acres). In addition, there will be 1,405 existing dwelling units exposed to ground transportation noise levels over 65 CNEL. The following table indicates the potential residential population that would be exposed to future noise levels if no mitigation measures were incorporated.



## AIRCRAFT NOISE

— 65 — C.N.E.L. CONTOURS



— SPHERE OF INFLUENCE

— CITY BOUNDARY

FIG. F-2



FIG. F-2

Potential Residential Population Exposed to  
Future Ground Transportation Noise (Year 2000)

	60-65 CNEL	65-70 CNEL	70+ CNEL
Presently Developed Area - #Pop =	4,641	3,529	265
Areas yet to be developed - #Pop =	18,012	13,427	6,481

(Source: see technical appendix.)

(Technical report and City of Irvine estimate is based on 1982 General Plan residential land use densities and population figures)

The City can control the future noise impacts for new developments to some extent by land use and transportation planning. Noise impacts on existing development can be reduced only by remedial mitigation measures which can be identified by "Special Noise Study" reports.

c. Aircraft

It is expected that over the years noise impacts to the City from aircraft operations at MCAS El Toro, MCAS Tustin, and John Wayne Airport will not be increased. Although the City of Irvine does not have jurisdiction over the aircraft operations, the City has a Memorandum of Understanding with the Marine Corps with respect to aircraft noise and operations. Also, based on the State Airport Noise Regulation (Title 21), John Wayne Airport (as a civil airport) is required to reduce the airport noise impact on existing communities.

2. Stationary Noise Sources

As the City develops further, it is expected that stationary noise levels will increase. However, by use of more rigid control measures and enforcement of the Noise Ordinance in the development process, the impacts can be mitigated.

Identification of Issues

The following is a summary of the major noise issues in the City of Irvine:

1. The City and its residents are exposed to significant noise impacts from the three major freeways, the railroad, and the three airports within its environs. Transportation noise levels are projected to increase as a result of increased traffic generated by future land development. How can the City ensure that residents are not exposed to excess mobile noise levels?
2. As the City develops it is expected that stationary noise levels will increase. How can the City ensure that residents are not exposed to excess stationary noise levels?
3. There is a multiplicity and incompleteness of noise regulations at various levels of government. How can these regulations be coordinated to provide a healthy noise environment?

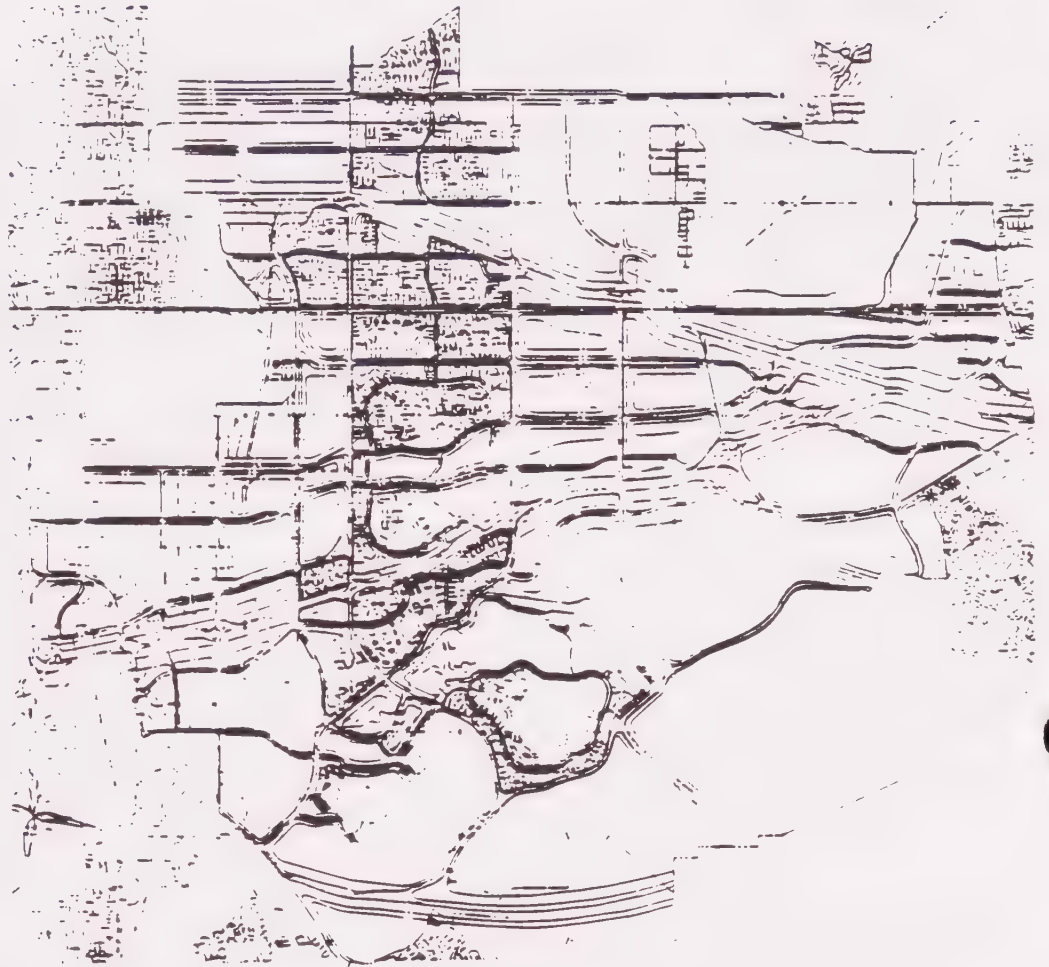


4. There is a lack of public knowledge about noise problems and regulations. How can public awareness in this area be increased?

#### Response to Issues

It has been determined that the City's efforts toward noise control and abatement should emphasize the integration of noise considerations into the community planning and development process. As part of the noise element, a Land Use Noise Compatibility Chart (Figure F-4) has been developed for the purpose of identifying the compatibility of proposed projects with future noise levels. The CNEL Interior and Exterior Noise Standards (Figure F-5) and the Single Event Noise Standard were developed to ensure that projects would not be exposed to unacceptable noise levels.

The following goal, objectives, and implementing actions have been formulated as a policy response to the noise issues identified.



# FUTURE HIGHWAY/RAILROAD NOISE

— — — — — NOISE CONTOURS

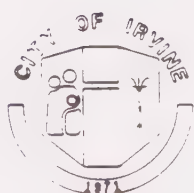


FIG. F-3

FIG. F-3

# INTERIOR AND EXTERIOR NOISE STANDARDS

## ENERGY AVERAGE(CNEL)

FIGURE F-5

LAND USE CATEGORIES		ENERGY AVERAGE (CNEL)	
<u>CATEGORIES</u>	<u>USES</u>	<u>INTERIOR</u> <sup>1</sup>	<u>EXTERIOR</u> <sup>2</sup>
RESIDENTIAL	Single Family, Duplex	45 <sup>3</sup>	55 <sup>4</sup>
	Multiple Family (M.F.)		65
	Mobile Home	—	65 <sup>5</sup>
COMMERCIAL/ INDUSTRIAL/ INSTITUTIONAL	Hotel, Motel, Transient lodging,	45	65 <sup>6</sup>
	Commercial retail, Bank, Restaurant	55	—
	Office building, Research development, Professional office, City office building	50	—
	Amphitheatre, Concert Hall, Auditorium meeting hall	45	—
	Gymnasium (Multipurpose)	50	—
	Sport clubs	55	—
	Manufacturing, Warehousing, Wholesale, Utilities	65	—
	Movie Theatre	45	—
INSTITUTIONAL	Hospital, Schools' classroom	45	65
	Church, Library	45	—
OPEN SPACE	Parks	—	65

### INTERPRETATION

- Indoor environment excluding: Bathrooms, toilets, closets, corridors.
- Outdoor environment limited to: Private Yard of single family  
M.F., Private Patio or balcony which is served by a means of exit from inside.  
Mobile home park  
Hospital patio  
Park's picnic area  
School's playground  
Hotel and Motel recreation area
- Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 12, Section 1203 of UBC.
- Noise level requirement with open windows, if they are used to meet natural ventilation requirement.
- Exterior noise level should be such that interior noise level will not exceed 45 CNEL.
- Except those areas affected by aircraft noise.



# LAND USE NOISE COMPATIBILITY

FIGURE F-4

LAND USE CATEGORIES		COMMUNITY NOISE EQUIVALENT LEVEL						
<u>CATEGORIES</u>	<u>USES</u>	<u>QNEL</u> < 55   60   65   70   75   80 >						
RESIDENTIAL	Single Family, Duplex, multiple family	A	A	B	B	C	D	D
RESIDENTIAL	Mobile Home	A	A	B	C	C	D	D
COMMERCIAL Regional, District	Hotel, Motel, Transient lodging	A	A	B	B	C	C	D
COMMERCIAL Regional, village District, special	Commercial retail, Bank restaurant, movie theatre	A	A	A	A	B	B	C
COMMERCIAL INDUSTRIAL INSTITUTIONAL, General	Office building, Research and development, Professional offices, City office building	A	A	A	B	B	C	D
COMMERCIAL Recreation INSTITUTIONAL, Civic Center	Amphitheatre, Concert hall Auditorium, Meeting hall	B	B	C	C	D	D	D
COMMERCIAL Recreation	Children's amusement park, Mini- ature golf course, go-cart track Equestrian center, Sport club	A	A	A	B	B	D	D
COMMERCIAL General, Special INDUSTRIAL, Gen.Man. INSTITUTIONAL	Automobile service station Auto Dealership Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	B	B	B
INSTITUTIONAL General	Hospital, Church, Library Schools' classroom	A	A	B	C	C	D	D
OPEN SPACE	Parks	A	A	A	B	C	D	D
OPEN SPACE	Golf course, Cemeteries, Nature Centers, Wildlife Reserves, Wildlife Habitat	A	A	A	A	B	C	C
AGRICULTURE	Agriculture	A	A	A	A	A	A	A

## INTERPRETATION

ZONE A  
Clearly Compatible

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

ZONE B  
Normally Compatible

New construction or development should be undertaken only after detailed Analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.

ZONE C  
Normally Incompatible

New construction or development should generally be discouraged. If new Construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design.

ZONE D  
Clearly Incompatible

New construction or development should generally not be undertaken.

GOAL F

NOISE ELEMENT

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Contribute to a healthy and safe environment by minimizing noise impacts.

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To achieve this goal, the City of Irvine has adopted the following objectives and implementing actions:

## OBJECTIVE F- MOBILE NOISE

Ensure that City residents are not exposed to mobile noise levels in excess of the CNEL Interior and Exterior Noise Standards (Figure F-5), and Single Event Noise Standard.

### Implementing Actions:

- a. Require that all plans submitted for development review show the noise element existing noise contour (Figure F-1), future noise contour (Figure F-3) and aircraft noise contours (Figure F-2).
- b. Prohibit residential development within the 65 CNEL of aircraft noise contours.
- c. Ensure that all proposed development projects are compatible with the future noise level by using Figure F-4.
- d. Require "Noise Study" reports to be prepared in accordance with the City's environmental review procedure for all projects that are not "clearly compatible" with the future noise level at the site.
- e. Require "Noise Study" reports to use the future motor vehicle noise reduction of 1.9 dBA in identifying future noise levels of streets as identified in the Technical Appendix.
- f. Require "Noise Study" reports to identify all the mitigation measures necessary to reduce noise levels to meet the CNEL standard (Figure F-5) and Single Event Noise Standard.
- g. Require Single Event Noise Standard for noise sensitive land uses within the 60 CNEL of aircraft and railroad noise contours.
- h. Implement the mitigation measures identified by "Noise Study" reports through imposing appropriate conditions of approval on development proposals.
- i. Require a clear designation of mitigation measures on subdivision maps, site plans, and building plans for inspection purposes as a condition for subdivision approval.
- j. Require conditional use permits for noise sensitive land uses such as hospitals, libraries, churches, and schools to consider structural design and siting so as to avoid noise-related impacts.
- k. Require any project (new construction or additions) applying for a building permit to meet the CNEL standards (Figure F-5) and Single Event Noise Standard as a condition of building permit issuance.
- l. Update highway/railroad noise contour maps (Figure F-1 and F-3), every five years and/or whenever the City's Irvine Traffic Analysis Program (ITAP) Model has been significantly changed.
- m. Use the future annual updates of John Wayne Airport's noise contour map for planning analysis.
- n. Use the latest available aircraft noise contours of the MCAS El Toro and Tustin for land use evaluation, upon review and approval by the Planning Commission and City Council.



- o. Pursue further study of the MCAS El Toro aircraft noise contours (AESO) for local patterns when economically feasible. The study shall include maximum single event noise levels as well as CNEL.
- p. Incorporate the following noise mitigation measures in the design of new highways and streets.
  - alignment
  - barriers
  - lateral separation
  - vertical profile
- q. Examine the existing and projected future noise environment when considering amendments to the City's circulation system.
- r. Reduce noise impacts from mobile sources by encouraging use of alternative modes of transportation such as biking, hiking, and horse riding.
- s. Include in the capital improvement budget, funds for the construction of remedial mitigation measures for areas impacted by existing highways and streets according to the following priorities:
  - degree of sensitivity
  - excess of the maximum allowable standards
  - length of time the noise impact existed
  - number of residential units
- t. Reduce railroad noise impacts by incorporating measures for mitigating noise levels to meet the City's noise standards.
- u. Participate in cooperative efforts with AT&SF Railway and other agencies to fund and construct a railroad lowering program through residential areas of the City.
- v. Develop a program to exact fair share contributions to a railroad lowering project from new residential development adjacent to the railroad (after construction of the railroad lowering project has been confirmed).

## OBJECTIVE F-2 STATIONARY NOISE

Ensure that City residents are not exposed to stationary noise levels in excess of the City Noise Ordinance standards.

### Implementing Actions:

- a. Require any project (new construction or additions) to meet the City Noise Ordinance standards as a condition of building permit approval.
- b. Require developers to depict on any appropriate development application review, (zone change, subdivisions, conditional use permit, site plan, and building plans) any potential noise sources known at the time of submittal and mitigation measures that insure these noise sources meet the City Noise Ordinance standards. Such sources include, but are not limited to, the following:
  - truck pickup and loading areas
  - mechanical and electrical equipment such as air conditioning, swimming pool pumps and filters, and spa pumps
  - exterior nuisances such as speaker boxes and outdoor public address systems
- c. Condition subdivision approval of the projects adjacent to any developed/occupied noise sensitive land uses by requiring developer to submit a construction related noise mitigation plan to the City Engineer for his review and approval prior to issuance of grading permit. The plan must depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of the project, through the use of such methods as:
  - temporary noise attenuation fences
  - preferential location of equipment
  - use of current technology and noise suppression equipment.

## OBJECTIVE F-3 NOISE ABATEMENT

Achieve maximum efficiency in noise abatement efforts through intergovernmental coordination and public information programs.

### Implementing Actions:

- a. Coordinate efforts to reduce noise impacts with appropriate public agencies and levels of government.
- b. Monitor federal and state legislation and programs which will reduce noise in Irvine.
- c. Use police power to enforce the appropriate noise standards in the state's motor vehicle code and other state and federal legislation for mobile noise sources.
- d. Support the use of noise reducing modifications to aircraft engines and operations in the City.
- e. Seek the cooperation of operators of private and military helicopters in the modification and selection of flight paths which will reduce helicopter noise impacts on residential and other noise sensitive areas.
- f. Revise noise related zoning regulations to be consistent with the noise element.
- g. Revise the City Noise Ordinance so that it will be more effective and clear in restricting noise from stationary sources.
- h. Develop an implementation chart identifying the responsibilities of each City division involved in the review process.
- i. Provide developers and homebuilders with the requirements of the noise element.
- j. Require any activities provided by the City either directly or through its contracting to comply with the state noise standards and the City's noise element and Noise Ordinance requirements.
- k. Disseminate public information regarding City noise regulations and programs, the health effects of high noise levels, and means of mitigating such levels.

### Standards

#### Mobile Sources

##### Land Use Noise Compatibility (Figure F-4)

This chart has been developed for identifying the compatibility of proposed projects in Irvine with future noise levels. The chart will be used in evaluating development projects including: general plan amendments, zone changes, subdivisions, and use permit.

##### Interior and Exterior Noise Standards (Figure F-5)

This chart identifies the interior and exterior noise levels for different land uses. The noise standards are established according to the uses, considering the state requirement (Title 25) and should be met by all projects.



## Single Event Noise Standard

$L_{\max}(10)$ for Typical occupancy for noise sensitive land uses within the 60 CNEL of Aircraft & Railroad	Less than	65 dBA 7 a.m.-7 p.m. 55 dBA 7 p.m.-7 a.m.
--	-----------	--

The maximum interior noise levels of the loudest 10% of single noise events ( $L_{\max}(10)$ ) for noise sensitive land uses shall not exceed 65 dBA daytime (7 a.m. to 7 p.m.) and 55 dBA nighttime (7 p.m. to 7 a.m.) for typical occupancy.

NOTE: The samples for single event noise measurement must include representative aircraft operation.

## Stationary Sources

### City Noise Ordinance Standards

#### Related Objective Numbers

Land Use Element - A-1, A-3  
Housing Element - C-5  
Circulation Element - D-2, D-8  
Public Facilities Element - G-1  
Conservation and Open Space Element - L-9

#### Compliance Regulations

##### Federal

Noise Control Act (NCA), 1972  
Federal Aid Highway Act  
Federal Aviation Safety and Noise Abatement Act, 1979  
Department of Housing and Urban Development (HUD) 24 CFR  
Federal Aviation Administration (FAA) 14 CFR, 1973, and part 77  
Federal Highway Administration (FHA) PPM 90-2  
Environmental Protection Agency (EPA) 40 CFR  
Public Contract Act (Walsh Healy)  
Occupational Safety and Health Act (OSHA) 1970

## State

Environmental Quality Act (CEQA)  
Health and Safety Code - Sections 24180-81 and 46000-80  
Government Code - Section 65302  
Motor Vehicle Code - Sections 23130, 27150, 27151, 27160,  
27200-7, 38365, 38370  
Motor Boat Noise Regulation - Section 654  
Real Estate Transactions - Section 11010  
Streets and Highways Code - Section 215, 216  
Administrative Code, Title 25 - Noise Insulation Standards  
Uniform Building Code - Chapter 35  
Noise Control Act (NCA), 1973  
Noise Control Safety Orders  
Penal Code - Section 415  
Public Utility Code - Sections 21670-78

## City

Noise Ordinance No. 136, 1975  
Resolution No. 1180, 1980 - Truck Routes and Weight Restrictions  
Resolution No. 1090, 1979 - Notification to Future Homebuyers  
Ordinance No. 211, 1978 - Animal Regulations, Section IV.E-709  
Memorandum Of Understanding (MOU), 1980  
CEQA Procedures  
City Zoning Ordinance









## **PUBLIC FACILITIES ELEMENT**

The Public Facilities Element provides a summary of information and a statement of public policy regarding public facilities. The Public Facilities Element is an optional element which if included in local general plans must be implemented (California Government Code 65303).

### Description of Public Facilities

Public facilities can be defined as institutional responses to basic human needs, such as health, education, safety, recreation, and worship. Examples of typical public facilities include churches, hospitals, and police stations. Public facilities contribute a vital part to the quality of life for both individuals and groups in the community. Public facilities may be utilized not only to provide convenient and efficient services but also to define the visual character of the City by bringing identity to its basic districts, corridors, and focal points. The types of community facilities, their relationship to one another, and their location should be a factor of the needs and desires of the people they serve, within the technological and organizational resources available.

Two primary planning considerations of public facilities are location and support population. For the purpose of this element, the location of public facilities is considered at or above the planning area level, primarily at district centers. District centers, because of their varied locational attributes and component public facilities, serve both the City of Irvine and the surrounding region to varying degrees. Public facilities should be grouped above the planning area level into district centers to encourage joint utilization. Figure G-1 describes the recommended district center components and preliminary site size guidelines. District centers should have some degree of city-wide significance to attract residents from other districts of the City, as well as attracting residents from the surrounding region to some degree.

Public facilities require a minimum support population. Figures G-2 and G-3 each show the minimum population levels necessary for specific facilities. These figures are approximate, and should only serve as a guideline for reviewing proposals for facilities.

### Existing Conditions

Public facility development in the City of Irvine has primarily occurred at the planning area level and at the University of California, Irvine. This includes libraries, churches, schools, community auditoriums, and similar localized facilities. City-wide facilities are not as developed but do include a temporary city hall, a junior college, and public services, such as police and fire.

### Trends

As the population of the City continues to grow, the support levels necessary for major city-wide and regional facilities will be attained. With the major growth of southern Orange County, the location of Irvine within the county and the planned regional access to the City, there is anticipated to be the potential for the location of many regionally oriented facilities within the City. Cable Television capacities established within the City should offer convenience, energy savings, and significant cost reduction possibilities for many types of public facilities.



# RECOMMENDED DISTRICT CENTER COMPONENT AND PRELIMINARY SITE SIZE GUIDELINES

FIGURE G-1

Facilities	Site Area Required
Hospital (250+ beds)	25-50 acres
Physical Health Clinic	5
Mental Health Clinic	5
Police/Fire Facility	5
Library	5
Museum/Cultural Center — secondary	3-5
Performing Arts — secondary	5-8
High School	40
Nature Center — ecosystems	50-100
District Commercial	12-30
District Recreation	20-50
City Services	5
City Hall	40
Performing Arts — major	25-50
Museum/Cultural Center — major	25
Junior Colleges	100
Private Colleges	75-100
Potential State/County/Federal Facilities	50
Zoo	100-200
Regional Commercial/Office	400

# COMPREHENSIVE PUBLIC FACILITY GUIDELINES

FIGURE G-2

PUBLIC FACILITY STANDARDS Population required to support facility ● MIT Study X Fairfax County Study	POPULATION		USERS	LIFE SUPPORT LINKS
	500 - 1000 1000 - 5000 5000 - 8000 8000 - 12,000 12,000 - 20,000 20,000 - 30,000 30,000 - 40,000 40,000 - 50,000 50,000 - 100,000 100,000 - 250,000 250,000 - 1,000,000 1,000,000 -	SCALE FLEXIBILITY (◀ AND/OR ▶) FREQUENCY OF USE (SCALE 1 - 5) WALKING DISTANCE (mins.) CHILDREN ADOLESCENTS YOUNG COUPLES YOUNG SINGLES MIDDLE-AGED ELDERLY FEEDER SYSTEMS LINE-HAUL TRANSIT UTILITARIAN CABLE TV POTENTIAL		
1. INSTITUTIONAL				
a. Post Office	100	▶	10	
b. Library	500	▶	15	
c. Church	500	▶	15	
d. Town Hall	500	▶	15	
e. Fire Station	500	▶	15	
f. Police Station	10,000	▶	15	
g. Waste Disposal Plant - advanced	500	▶	15	
h. Waste Disposal Plant - conventional	500	▶	15	
i. Dispersed Community Clinics	10,000	▶	15	
j. Multi-Purpose Centers	25,000 X 30,000	▶	15	
k. Utilities Office	50,000	▶	15	
l. Airport	50,000	▶	15	
m. Railway Station	50,000	▶	15	
n. City Hall	50,000	▶	15	
2. RECREATION I				
a. Communal Garden	100	▶	5	
b. Infants' Play Space	100	▶	5	
c. Children's Play Space	100-700	▶	5	
d. Restaurant	200	▶	10	
e. Local Park	200-1000	▶	10	
f. Playground	500	▶	10	
g. Bar, Saloon	500	▶	15	
h. Gymnasium, Meeting Rooms, Arts and Crafts	10,000	▶	15	
i. Local Museum	100	▶	30	
j. Art Gallery	100	▶	30	
k. Small Craft and Boating Rental	100	▶	30	
l. Community Theater, Auditorium	10,000	▶	20	
m. Special Restaurant	100	▶	30	
n. Coffee House, Night Club, etc.	100	▶	20	
o. Playfield	100	▶	15	
p. Indoor Swimming Pool	10,000	▶	15	
q. Movie Theater	100	▶	15	
r. Health Club	100	▶	15	
s. Ice Rink	10,000	▶	20	
t. Community TV Station	100	▶	20	
3. RECREATION II				
a. Drive-In Theater	50,000	▶	20	
b. Golf Course	25,000 X	▶	20	
c. Golf Driving Range	10,000	▶	30	
d. Tennis Club	2,000 X	▶	20	
e. Swimming Beach	100	▶	10	
f. Marine	100	▶	30	
g. Convention Hall	100,000	▶	30	
h. Football/Baseball Stadium	100	▶	30	
i. Olympic Swimming Pool	100	▶	20	
j. Local TV Station	250,000	▶	20	
k. Regional Park	500,000	▶	30	
l. Amusement Park	100,000	▶	30	
m. Symphony Orchestra	1,000,000	▶	30	
n. Zoo	100,000	▶	30	
4. EDUCATION				
a. Day Care Center	500	▶	10	
b. Children's Play Space	100-700	▶	10	
c. Elementary School	11,000	▶	15	
d. Middle School	5,000	▶	15	
e. Library, Educ. Resources Center	500	▶	15	
f. High School	5,000	▶	20	
g. Dispersed Day Care Centers	20,000	▶	10	
h. Dispersed School and College Facilities	50,000	▶	15	
i. Centralized Educational Complexes	100	▶	20	
j. Community TV Station	100	▶	20	
k. Vocational College	100	▶	20	
l. Community College	100	▶	30	
m. Junior College	100	▶	30	
n. College	100,000	▶	30	
o. University	500,000	▶	30	
p. Graduate University	1,000,000	▶	30	
q. Free University	1,000,000	▶	30	

(Continued on next page)



# COMPREHENSIVE PUBLIC FACILITY GUIDELINES

FIGURE G-2

(Continued)

PUBLIC FACILITY STANDARDS	POPULATION		USERS	LIFE SUPPORT LINKS
	POPULATION REQUIRED TO SUPPORT FACILITY	SCALE FLEXIBILITY (SCALE 1 - 100) FREQUENCY OF USE (SCALE 1 - 100) WALKING DISTANCE (mins.) CHILDREN ADOLESCENTS YOUNG COUPLES YOUNG SINGLES MIDDLE-AGED ELDERLY FEEDER SYSTEMS LINE-HAUL TRANSIT UTILIDOR CABLE TV POTENTIAL		
● MIT Study X Fairfax County Study	500 - 1000 1000 - 5000 5000 - 8000 8000 - 12,000 12,000 - 20,000 20,000 - 30,000 30,000 - 40,000 40,000 - 50,000 50,000 - 100,000 100,000 - 250,000 250,000 - 1,000,000 1,000,000 -			
<b>5. HEALTH</b>				
a. 2 Chronic Disease Beds	10,000	10		
b. 4 Nursing Home Beds	10,000	10		
c. 5 Mental Hospital Beds	10,000	10		
d. Diagnosis and Treatment Center	10,000	10		
e. Welfare Agency	25,000	20		
f. 100-Bed Hospital	25,000	20		
g. Public Health Center	35,000	20		
h. 225-Bed Hospital	50,000	20		
i. Mental Health Clinic	50,000	20		
j. Rehab. Center	75,000	20		
k. 340-Bed Hospital	100,000	20		
l. 450-Bed Hospital	150,000	20		
<b>6. EMPLOYMENT</b>				
a. Office Complex	10,000	30		
b. Services Complex	10,000	30		
c. Light Industry	10,000	30		
d. Local "Neighborhood" Industrial and Commercial Cooperatives	10,000	15		
e. Heavy Industry	50,000	30		
f. Industrial Park	100,000	30		
g. Dispersed Employment	10,000	20		
<b>7. COMMERCIAL</b>				
a. Corner Store	500	10		
b. Convenience Grocery Store	2000	10		
c. Delicatessen and Bakery	3000	10		
d. Drug Store	1000	10		
e. Snack Bar	1000	10		
f. Liquor	1000	15		
g. Beauty Parlor	1000	15		
h. Service Station	5000	15		
i. Bank Office	1000	15		
j. Hardware	1000	15		
k. Barber Shop	1000	15		
l. Single-Purpose Store	10,000	20		
m. Supermarket	10,000	15		
n. News and Periodicals/Stationery	10,000	10		
o. Department Store	20,000	15		
p. Local Shopping Center	10,000	15		
q. Hotel/Motel	10,000	20		
r. Regional Shopping Center	150,000	30		
<b>8. TRANSPORTATION</b>				
a. Private Parking	2000	100		
b. Auto Service Station	2000	100		
c. Public Parking	20,000	15		
d. Public Bus Transport	20,000	15		
e. Taxi Service	20,000	100		
f. Bus Station	20,000	20		
g. V/STOL Stop	20,000	20		
h. Train Station	20,000	30		
i. Small Gen'l Aviation Airport	20,000	30		
j. Inter-City Airport	20,000	30		

# SERVICE POPULATION AND SITE SIZE GUIDELINES

## FOR MAJOR PUBLIC FACILITIES

FIGURE G-3

Population	Neighborhood						Flatland Village		District		City
Facility	100 200	200 500	500 1,000	1,000 2,000	2,000 5,000	5,000 10,000	10,000 20,000	20,000 50,000	50,000 100,000	100,000+	500,000
Regional Park										25 ac/10,000	5 ac/1,000
Zoological Garden (1,000,000 pop.)											150 ac
Museum						1 ac		1 ac			
Art Gallery						1 ac		1 ac			
Performing Arts										Rep. Theatre 100-1,500 Seats Music Hall 1,000 Seats	
Libraries							10-15 min 1 ac	40-700 2 ac	8 pumps, 2 trucks 10-100,000 pop.		100,000 sq ft 5 ac
Fire Stations	1 min response 15 min to 2 mi Service depends on phase & density						1-15 pumps 15 trucks 1-15 ac				
Police Stations	5 min normal response 2 min emergency response						1-1/10,000 5-1 ac 10-100 ac 10-100 ac				
Day Care			1/100								
Schools			1 ac								
Elementary				250-400 52 ac	600-150 10 ac						
Intermediate											
High School							100-1,000 20 ac 1,000 20- ac	1,000-1,000 40- ac			
City Hall Complex							2 ac		10 ac		
Neighborhood Center							1 ac				
Community Center							10,000 1 ac	1-10 min 2 ac			
Interfaith Center					1/1,000 1 ac		10,000 2 ac	10-100 min 2 ac			
Nature Centers											
Other Parks		4.5 ac/100			2.5 ac/1,000 2.5 ac		1 ac/1,000 50 ac	1/1,000 100 ac		10 ac	
Baseball						1/6,000 40 ft					
Softball					1/10,000 40 ft						
Tennis					1/5,000 8 x 1 min						
Basketball			1/4 ac								
Swimming Pools								15 ac 1 g. 100,000		100,000 sq ft	
Mental Health											
Hospital						1 bed/10,000 pop. community & home	10-15 stories 10-15 ac	chance 1-10 ac 250 bed 90-50 ac			
Physical Health				1/1,000 1,000 pop.							
Paramedics											
Ambulance Service											
Commercial Centers				1,000 1 ac		400-1,000 7 ac					
Neighborhood											
Community								11,000 min 1-10 ac			
Regional										150,000 min 80 ac min	
Sports Stadium										30 ac	
Convention Center										10-10 ac	
Transportation								10,000-10,000 10-100			
Public Bus System											
Taxi System											
Commuter Rail Stop									50,000		
Personal Rapid Transit											
Golf Course										10,000 100 ac 10 holes	

LEGEND

USE R POP  
FACILITY SIZE

> OR LESS  
< OR GREATER



## Identification of Issues

The following is a summary of major issues in the City of Irvine regarding public facilities:

1. Many different agencies and institutions, including the City, are involved in the provision of public facilities. Existing agencies from whom the City may need to purchase services are, in some cases, tied to somewhat fixed notions of facility and service standards which are more appropriate for serving older, established communities. Additionally, existing agencies are limited in the extent to which they may cooperate legally and procedurally with each other. How can the City facilitate the coordination of the various agencies and institutions involved in the provision of public facilities?
2. The availability of many County and special district services offers the City an opportunity to choose from the option of contract services or providing its own facilities. The diversity, quality, and magnitude of public facilities desired by the residents of Irvine are likely to be costly. How can the City determine priorities for funding public facilities?
3. Public facilities should reflect the desires and needs of the citizens of the City. How can citizens be encouraged to participate in the development of the City's public facilities and institutions?

## Response to Issues

The Public Facility Element goals were based on three types of research: review of existing studies, discussions with citizen members of the Public Facilities Subcommittee and Community Services Commission, and meetings with public agencies who currently, or may in the future, provide facilities and services to the City of Irvine. The definition of appropriate public facilities standards and levels of service should be viewed as an ongoing process. Thus, the standards adopted in this element form an initial point of departure. The following goals, objectives, and implementing actions have been formulated as policy responses to guide the development of public facilities.

## GOAL G

### PUBLIC FACILITIES ELEMENT

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Provide a full range of necessary public facilities and services that are convenient to users, economical, reinforce City and community identity, and reflect the participation of citizens.

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To achieve this goal, the City of Irvine has adopted the following objectives and implementing actions:

## OBJECTIVE G-1 PUBLIC FACILITIES DEVELOPMENT

Coordinate planning and development of Irvine's public facilities and services with the private sector, University of California, Irvine, the Irvine Unified School District, Orange County and other public agencies.

### Implementing Actions:

- a. Coordinate public/private capital improvements through an interrelated 5-year public/private capital improvements program that provides for the relating of public facilities to economical extensions of the master utility systems.
- b. Utilize the capital improvements program as the vehicle for determining what facilities are necessary over time in relationship to the City's financial resources.
- c. Develop joint-use/joint-power approaches to facilities with the Irvine Unified School District, University of California, Irvine and other appropriate agencies. Facilities with greatest potential for joint-use/power agreements with the school district and University of California, Irvine, include museums, libraries, theater, conference centers, extended learning facilities, and related support facilities such as parking.
- d. Evaluate periodically the City's public facility standards to refine levels of service and definitions of convenience to users and reinforcement of community identity.
- e. Develop a more detailed set of program requirements for each public facilities system which will be used in refining locational concepts, site sizes, and costs for purposes of precise plans and the City's capital programming process.
- f. Encourage the establishment of two major hospital facilities of approximately 250 beds each.
- g. Develop a detailed health care system plan for the linking of district outpatient health centers to major hospital facilities at the University of California, Irvine and at the Northern Flatlands/Santiago Hills district center.
- h. Utilize the full expertise of the University of California, Irvine and the County Health Department in developing a comprehensive health care program and set of facilities for the City.
- i. Encourage the development of group practice private medical facilities around major hospitals, at each of the district centers, and within the activity corridor. Group practice facilities should include space for a minimum of 15-20 doctors serving a population of 15,000-20,000 people.
- j. Encourage the provision of Interfaith Centers at all major and secondary district centers as well as within individual planning areas. Interfaith Centers consist of religious facilities for worship, education, and fellowship activities which are shared by two or more denominations or faiths.
- k. Encourage the grouping of public facilities above the planning area level into district centers.



- l. Provide library space at a minimum level of 5 people per square foot utilizing County services while continuing to explore future options. Future options may include development of a City library system or utilizing cable TV potentials for tie-ins to the various libraries of the University of California system. Intermediate scale facilities between the planning area-oriented libraries now being developed and the large-scale University of California, Irvine library, which is open to the public, at district centers are now being explored.
- m. Encourage development of a sports stadium to be developed in cooperation with and at the University of California, Irvine.
- n. Encourage the location of junior and private colleges at the various district centers.
- o. Stage development so as to assure the viability of the University District and Regional Center, with its full component of educational, cultural, health, and governmental facilities.
- p. Work with KATV-3, cable television station, the University of California, Irvine and The Irvine Company to continue exploration of the potential cost savings and innovations and improvements in services which may be possible through the utilization of cable TV.
- q. Develop a detailed program for the series of nature centers recommended at:
  - The University of California, Irvine San Joaquin Marsh (natural area related)
  - Inland and northern hill locations (natural area related)
  - Northern Flatlands/Santiago Hills District (related to preservation of agricultural lands)
- r. Develop a detailed program for a Museum of Western History related to the City and to a systematic program of archaeological exploration of the planning area (see cultural resources element).
- s. Develop a Museum of Systematic Biology at the University Center related to San Joaquin Marsh, Upper Newport Bay, and other natural areas of the City.
- t. Develop a specialized zoo just north of the Santa Ana Freeway within the district center. This zoo would relate to the City's Museum of Western History at City Hall and adjacent Museum of Agriculture and Farmland Preservation. Emphasis would be on animals related to the western U.S. and to farming realizing that other types of facilities are adequate through Los Angeles Zoo, and the San Diego Zoo.
- u. Utilize the General Plan Land Use intensity tables (A-5 through A-10) for the purpose of sizing utility systems.
- v. Provide for the orderly provision of public facilities in relationship to residential, commercial, and industrial development in the growth control provisions of the City's Zoning and Subdivision Ordinances.
- w. Provide community facilities for the elderly and encourage their involvement in the community. Avoid large projects for senior citizens.
- x. The City will include the school districts in the review of tentative tract maps within their respective districts to ensure adequate school facilities and services are provided.



## OBJECTIVE G-2 CITY SERVICES

Develop, as the City grows, an appropriate balance between City-provided and contracted services.

### Implementing Actions:

- a. Contract fire and emergency ambulance services for as long as service received is adequate, sufficient community identity for Irvine is maintained, and the City is unable to afford its own programs.

### OBJECTIVE G-3 PUBLIC PARTICIPATION

Encourage the participation of citizens and the pursuit of excellence in the development of the City's public facilities and institutions.

#### Implementing Actions:

- a. Create an awareness of the role of science and technology in the City's cultural life and environmental quality.
- b. The City shall serve as a catalyst to marshal resources from the public schools, UCI, private industry, and other sources but shall not directly attempt to finance or control this area of community life.
- c. Stimulate excellence in all the visual and performing arts.
- d. Encourage the design and development of low-cost spaces and publicly visible spaces for sales and/or cultural festival.

## Standards

### Public Facilities Standards

Public facilities standards for public and private facilities shall be initially developed according to three figures:

Figure G-1, Service Population and Site Size Requirements for Major Public Facilities.

Figure G-2, Comprehensive Facilities Standards

Figure G-3, Recommended District Center Components and Preliminary Site Size Guidelines

Group practice facilities should include space for a minimum of 15-20 doctors serving a population of 15,000-20,000 people.

### Public School Site Selection

Public school site selection shall be evaluated on the following criteria:

Schools should be located on streets having parallel bicycle lanes or paths as shown on the City's adopted Master Plan of Bikeways.

Discourage the development of elementary school facilities in close proximity to commercial sites.

Foot paths and inter-planning area walkways should act as organizing spines and bike paths to connect primary schools.

Prohibit development of future school facilities in noise sensitive areas which are encompassed by the 65 CNEL aircraft noise contour.

Prohibit development of future school facilities in aircraft crash hazard areas as shown in the existing general plan.

All elementary and intermediate school facilities shall be centralized within residential areas when feasible.

Elementary facilities shall be located on local streets and/or local collectors so as not to require the crossing of highly traveled streets.

All proposed public school facility developments in hillside areas should be located on sites which minimize the need for grading.

Pedestrian and bicycle access to school sites from their attendance areas should be maximized.

Schools and public parks should be located adjacent to each other when feasible.

### Related Objective Numbers

Land Use Element - A-1, A-2, A-3, A-5  
Urban Design Element - B-2  
Housing Element - C-3  
Circulation Element - D-3, D-4  
Scenic Highways Element - E-1  
Noise Element - F-1, F-2, F-3  
Waste Management Element - H-1, H-2  
Safety Element - J-2  
Parks and Recreation Element - K-1, K-2, K-3, K-4  
Seismic Element - M-2  
Cultural Resources Element - N-1, N-2

### Compliance Regulations

Capital Improvement Program









## WASTE MANAGEMENT ELEMENT

The Waste Management Element provides the basis for long range waste management planning within the City's planning areas. The Waste Management Element is an optional element which if included in local general plans must be implemented (California Government Code 65303).

### Description of Waste Management

Waste management can be described as an efficient system for the collection and disposal of waste products generated by households, industry, and commercial enterprises. Wastes can be liquid and solid, hazardous and non-hazardous.

The collection and disposal components of waste management are further described as follows:

#### 1. Collection

Solid waste collection is usually accomplished by picking up refuse at the sources via collection vehicles. Refuse can be collected in mass, or refuse can be sorted for separate collection of garbage and recyclable materials.

Liquid, non-hazardous wastes are usually collected through a sewer system. Liquid, hazardous wastes are either treated at the waste source to neutralize hazardous components and then placed in the sewer system, or non-treated hazardous wastes are collected in collection vehicles for ultimate disposal.

Transfer stations can be utilized to supplement collection of either solid wastes or hazardous liquid wastes. Transfer stations are used if the haul distances of the collection vehicles from waste source to waste disposal site are great enough to economically justify transfer of wastes from the smaller collection vehicles to the larger transfer vehicles.

#### 2. Disposal

Solid wastes can be disposed of in several ways. The following describes some disposal options:

- a. Sanitary landfill - in this disposal method, unsorted solid wastes are placed, usually in a canyon, and then covered daily with soil to prevent odors from escaping or water from saturating the filled material;
- b. Recycling - reusable solid wastes, such as aluminum, glass, or steel can be removed from the waste stream and disposed of at recycling centers for their eventual reuse;
- c. Waste-to-energy facilities - refuse can be disposed of at a waste-to-energy facility where waste is incinerated to produce heat for either steam production or electrical generation;
- d. Composting - biodegradable wastes such as tree trimmings, grass, or kitchen wastes can be composted to produce a humus-like product. Humus can be



used either commercially for fertilizer or for land reclamation projects or for the final cover at landfills.

Liquid, non-hazardous wastes are usually treated at a waste water treatment facility with the liquid waste (effluent) being disposed of in the ocean or treated for reuse as reclaimed water. The resulting sludge can be disposed of in the following ways:

- a. Sanitary landfill - sludge can be mixed with solid wastes at a landfill and covered with a daily layer of soil.
- b. Sludge farming - sludge can also be air dried at "sludge farms," composted, and used for either commercial or land reclamation uses.
- c. Incineration - in this disposal method sludge is mixed with either solid wastes or other combustible material to be incinerated. The resulting heat can be used to produce steam for either commercial use or electrical generation.

Liquid, hazardous wastes are required by state law to be treated on-site or at a designated waste treatment facility to neutralize hazardous materials.

#### Existing Conditions

Residential, commercial, and industrial solid waste is presently collected by private firms, with residential collections franchised by the City. The waste collected is transported directly to the Bee Canyon Landfill. This facility is located north of Sand Canyon Avenue in Planning Area 3 and is operated by the County of Orange. The County also operates Santiago Canyon Landfill located just beyond the northern boundary of the planning area. A solid waste transfer station exists within Planning Area 36 (Irvine Business Complex).

The existing wastewater system for Irvine Ranch Water District collects wastewater within the planning area. It is then treated at the Michelson Reclamation Plant. The plant was constructed in 1966 and expanded in 1976 to its present capacity of 7.0 million gallons per day (mgd). All treatment effluent from the plant is pumped to Rattlesnake Reservoir for use in agricultural and landscape irrigation.

Residues of treated hazardous wastes are currently disposed of at Class I landfill sites. No sites exist in Orange County and therefore materials must be transported to the BKK landfill in Covina or to sites in Santa Barbara or Bakersfield.

#### Trends

Waste generation rates can be expected to rise over time. Compounding this will be a rise in the population which, added to the increased rates, will cause a marked increase over current levels of waste being generated.

In contrast to the increase in wastes is the anticipated closure of the Santiago Canyon Landfill in five(5) years. Replacement of their facilities with some form of waste disposal option, at a time when public awareness of waste disposal environmental effects is just emerging, will perhaps be the most critical issue of waste management in the following years. It can be anticipated that alternatives to sanitary landfills will emerge as viable options as the economics of landfills becomes increasingly prohibitive, both in terms of land and haul costs, as well as, costs associated with environmental degradation.

Another trend that can be expected in the coming years is a shift from conventional handling of liquid, hazardous wastes and sludge disposal to other alternatives more responsive to the environmental and economic impacts of disposal. It can also be expected that the County's role in providing waste disposal sites will be minimized as the private sector assumes responsibility for providing waste disposal facilities. This shift in roles will increase the responsibility of the City to review and control waste facility sites, so as to minimize potential adverse impacts on the City.

#### Identification of Issues

1. Solid waste facility siting can be very controversial and sensitive to the community. What role should the City play in determining the location of a solid waste facility?
2. Collection of municipal solid wastes has traditionally been under City control and disposal of wastes has been under County control. An emerging trend, however, is to locate privately operated disposal sites in incorporated areas. What control does the City have in regulating these private enterprises?
3. Waste facilities can negatively impact surrounding land uses if not properly planned. What criteria can the City use in determining the land use compatibility of a waste facility with its neighbors?
4. Waste facilities can accept refuse or wastes from outside of the City's planning area. What is the City's responsibility in providing facilities (through land use decisions) for other cities' benefit?

#### Response to Issues

The City of Irvine can actively participate in the review and implementation of waste disposal facilities by monitoring actions of the County, responding to proposals, and by utilizing the following goal, objectives, and implementing actions.

## GOAL H

### WASTE MANAGEMENT ELEMENT

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Coordinate and provide for the efficient disposal of refuse and solid waste material without deteriorating the environment of the planning area.

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This goal is supported by the following objectives and implementing actions:

## OBJECTIVE H-1 SOLID WASTE

Cooperate in guiding the development and improvement of a solid waste disposal system within the County of Orange that will meet the needs of the City of Irvine and protect the City from damage by unplanned disposal of refuse.

### Implementing Actions:

- a. Utilize the General Plan as a baseline for estimating waste disposal requirements and resultant program needs.
- b. Encourage continued study of alternative waste disposal methods and technology with emphasis on re-use of solid waste material and on waste-to-energy.
- c. Develop all waste disposal programs in cooperation with the engineers of both the landowners and the County.
- d. Work closely with the operator(s) of existing landfill sites to minimize deleterious effects on surrounding land uses including possible impacts generated by rodent and insect populations, odors, and ground water conditions.
- e. Develop detailed implementation studies regarding the need and timing, for transfer station(s) within the planning area.
- f. Explore the possibility for a system of solid waste management that will facilitate recycling waste products and the possible generation of fuel at either the Citywide, district, village, or individual home scale.
- g. Continue to monitor the feasibility of providing solid waste collection as a City service.
- h. Explore the possibility for a system of solid waste collection that will facilitate recycling waste products at a Citywide scale.
- i. Encourage during development case review, solid waste conservation and recycling efforts for residential, commercial, industrial, institutional and recreational land uses to reduce the amount of waste disposed at landfills.
- j. Hazardous Waste:
  1. Require industries which plan to store hazardous or toxic materials in underground tanks to obtain all necessary permits and comply with standards set forth by the EPA and Regional Water Quality Control Board.
  2. Require businesses which intend to handle or store hazardous substances to obtain all appropriate permits and comply with all regulations and standards administered by the California Department of Health Services, Orange County Fire Department Code and the City of Irvine Building and Safety Code.
  3. Hazardous waste materials are to be handled and disposed of in the manner specified by the State of California Hazardous Substances Control Law, standards established by the California Department of Health Services, Office of Statewide Health Planning and Development, and according to the



requirements of the California Administrative Code (Health and Safety Code Division 20, Chapter 6, 5, Administrative Code Title 30, Chapter 30).

4. Support the Orange County Fire Department "Regional Household Hazardous Materials Collection Center" program through public awareness education programs, such as City Cable TV announcements, pamphlets, etc.
5. Work closely with the Orange County Fire Department in siting and obtaining any necessary permits for the proposed regional household hazardous material collection site located within the City of Irvine.

## OBJECTIVE H-2 SITING REQUIREMENTS

Control the siting of waste disposal facilities so that they will have minimum impact on adjacent or existing planned land uses.

### Implementing Actions:

- a. Utilize the compatibility matrix and rating chart shown as Figures H-1 and H-2 in reviewing proposed solid waste disposal or transfer station sites.
- b. Coordinate with the County of Orange as early as possible in the planning of waste facilities within the City of Irvine.
- c. Pursue citizen input early in the planning process in order to identify community concerns regarding the location of a waste facility within the planning area.
- d. Review waste facility proposals in terms of costs and benefits to the City of Irvine. Particular attention should be paid to large scale facilities where the bulk of wastes is generated outside of the City's planning area.
- e. Landfills shall be operated at levels that at least meet State minimum standards.
- f. The landfill operator shall utilize best available technology (BAT) as part of their landfill operations.
- g. Landfills shall be operated in such a manner to minimize adverse environmental impacts.

FIGURE H-1

# LAND USE COMPATIBILITY MATRIX

FACTOR	FACTOR WEIGHT	(IMPACT RATING - MITIGATION POTENTIAL)	WEIGHTED VALUE	NOTES
Proximity to sensitive uses	10 existing uses 8 planned uses			Score of 45 or higher will exclude potential site from future consideration
Access through sensitive use areas	8 existing uses 6 planned uses			
Relation to major arterials	6			
Size of facility	5	0		
Expected lifetime	5	0		
After use potential	3			use for review of landfills only
Waste generation area	2	0		

How to use this matrix:

TOTAL

min. 12 max. 195 landfills

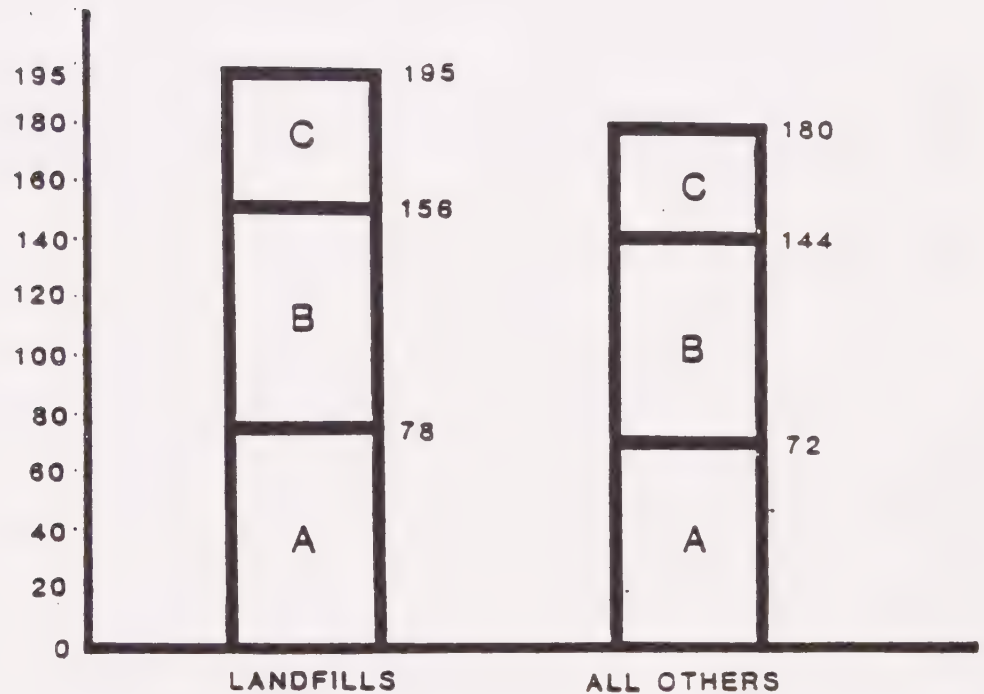
1) multiply factor weight and the sum of impact rating minus mitigation potential to figure weighted value. 2) add

min. 12 max. 180 all others

weighted values to figure total 3) compare total with the land use compatibility rating chart

# LAND USE COMPATIBILITY RATING CHART

FIGURE H-2



- A. Acceptable: no significant impacts on adjacent uses.
- B. Acceptable with conditions: Proposals in this category will have some significant impacts on the City of Irvine. Approval of sites should be contingent on circumstances that would add benefits to the city to offset some of the impacts. The higher rating indicates the more severe the impacts, therefore, benefits should also rise proportionately.
- C. Not acceptable: significant impacts on adjacent uses. Site should be removed from further consideration.



## LAND USE COMPATIBILITY

### MATRIX

- I. Proximity to Sensitive Uses: The City of Irvine considers residential, schools, public institutions and unique open space areas, both existing and planned, to be sensitive uses for any solid waste facility. Proximity to commercial uses is usually unacceptable for a waste to energy facility, except when design considerations are accounted for. Proximity to industrial uses for a transfer station is normally acceptable. Commercial and industrial uses are not acceptable near a landfill site.

- A. Impact Rating: When considering a solid waste facility's impact on sensitive uses, the following items should be considered. Will the facility subject large concentrations of people to noise, dust, odors, vectors or view of the facility?

0	=	no impact
1,2	=	minimal impact
3,4	=	nuisance
5	=	significant impact

- B. Mitigation Potential: A facility can best be mitigated by distance from sensitive uses; however, other considerations such as prevailing wind conditions or screening by landforms could be used to assess the mitigation potential.

0	=	no mitigation potential
1,2	=	minimal potential
3,4	=	significant potential
5	=	all impacts completely mitigated

- II. Access Through Sensitive Use Areas\*: Access routes through any residential areas are unacceptable to the City of Irvine. Care should be taken to minimize access along routes where schools, hospitals and other public institutions are located. For a transfer station, access routes as well as egress routes should be analyzed. Industrial areas are normally acceptable as an access/egress route for a transfer station or waste to energy facility. Commercial areas are normally not acceptable for access to any facility.

- A. Impact Rating: When assessing an access route, care should be taken to consider not only uses adjacent to the route but also the number of vehicles proposed, impacts of noise and litter and visibility of trucks to uses.

0	=	no impact
1,2	=	minimal impact
3,4	=	nuisance
5	=	significant impact

\*both existing and planned

- B. Mitigation Potential: The best mitigation would be relocation of the access route through a non-sensitive area (i.e., open space areas with no scenic

value), but consideration should also be given to screening of access routes(s).

0	=	no mitigation potential
1,2	=	minimal potential
3,4	=	significant potential
5	=	all impacts completely mitigated

III. Relation to Major Arterials: Waste facilities should be located near major arterials so that traffic impacts are minimized. In addition, major arterials are generally built for heavy vehicular and truck traffic. The addition of collection vehicles then would not be unexpected.

A. Impact Rating: Items to consider when reviewing a facility's proximity to arterials are the arterials' ability to handle additional traffic, their structural ability to handle daily heavy loads, and the pedestrian/vehicle conflict potential.

0	=	adequate arterials available, no impact to circulation
1,2	=	adequate arterials available, some impact to circulation but minor
3,4	=	limited arterials, major traffic impacts
5	=	no arterials nearby for use

B. Mitigation Potential: Possible mitigation measures would be street improvements such as widenings or signalization of intersections. Special consideration should be given to proposals that reduce traffic congestion or conflict.

0	=	no mitigation potential
1,2	=	minimal potential
3,4	=	significant potential
5	=	all impacts completely mitigated

IV. Size of Facility: Waste facilities can range from small local facilities to large scale facilities which serve a large portion of the region. Size of the facility is usually indicative of the impacts a facility will have on surrounding land uses in terms of noise, odors, traffic and visual intrusion.

A. Impact Rating: When considering the size of a facility, acreage as well as capacity should be reviewed to determine its impact rating. Whichever factor presents the greatest impact shall be used.

0	=	not applicable
1,2	=	5 acres or less; less than 100 tons per day (TPD) accepted
3,4	=	20 acres or less; less than 1,000 TPD accepted
5	=	21 or more acres; over 1,000 TPD accepted

B. Mitigation Potential: Not applicable, assigned a "0".

- V. Expected Lifetime: Facilities which have the potential for long term operation will have long term impacts on land use planning in adjacent areas. Given the potential for land use implications, the City considers a long lifetime to be a significant impact on adjacent properties.

A. Impact Rating: Facilities shall be rated as follows:

0	=	not applicable
1	=	less than 5 years
2	=	6-10 years
3	=	11-20 years
4	=	21-25 years
5	=	25 or more years

B. Mitigation Potential: Not applicable, assigned a "0".

- VI. After Use Potential (Landfills Only): The City of Irvine considers it important for landfill sites to be developed so their after use potential can be maximized. Landfills which are poorly developed or restrict an effective after use are not acceptable to the City.

A. Impact Rating: When reviewing a landfill's after use potential, care should be given to determining the extent of natural habitat/scenery destruction, relationship with adjacent uses, and compatibility with the City's General Plan land use map.

0	=	significant potential
1,2	=	significant potential but there will be some cost to natural habitat
3,4	=	limited potential
5	=	no potential

B. Mitigation Potential: Landfills can be developed which mitigate destruction to large areas of wildlife or the natural scenery. Other items to consider are the landfill's grading plan which can maximize after use, contouring to blend in the after use with adjacent uses and compatibility with the after use and adjacent open space areas.

0	=	no mitigation potential
1,2	=	minimal potential
3,4	=	significant potential
5	=	all impacts or restrictions to after use mitigated

- VII. Waste Generation Area: The City of Irvine accepts responsibility for wastes generated within its own planning area. However, the City is not obligated to provide a waste disposal solution for other cities or areas which have not or will not find a solution for themselves. In reviewing a facility the percentage of Irvine wastes to be accepted there shall be considered and rated.

A. Impact Rating: Facilities shall be rated as follows:

0	=	100% of waste is locally generated
1	=	85% - 99% of waste is locally generated
2	=	60% - 84% of waste is locally generated
3	=	45% - 59% of waste is locally generated
4	=	30% - 44% of waste is locally generated
5	=	less than 30% of waste is locally generated

B. Mitigation Potential: Not applicable, assigned a "0".



## OBJECTIVE H-3 WASTE WATER

Control waste water and liquid runoff in a manner so it will have minimum impact on adjacent or existing planned land uses.

### Implementing Actions:

- a. Investigate the use of recycled water sources for secondary water uses, such as fire hydrants, on-site fire sprinkler systems and waste water systems.
- b. Encourage the use of recycled water for irrigation purposes to the greatest extent feasible.
- c. Require developers of new projects located adjacent or upstream of natural water courses to develop drainage systems which will direct low flows (those which carry the most pollutants) away from natural water course into an improved (lined) channel.
- d. Require that as part of tentative tract map approval and prior to issuance of building permits, evidence be provided that any proposed development will have adequate sewer service, including assurance that both collection system and treatment capacity is available.
- e. Insure that if surface water is collected anywhere for discharge as a point source, or if a point source discharge is contemplated, a National Pollution Discharge Elimination System (NPDES) permit must be obtained from the Regional Water Quality Control Board.
- f. Encourage the use of alternative Best Management Practices (BMP) to control and minimize urban pollutant runoff, such as those BMP's discussed in Controlling Urban Runoff: A practical Manual for Planning and Designing Urban BMP's (July, 1987), published by the Metropolitan Washington Council of Governments.

### Standards

(Reserved)

### Related Objective Numbers

Public Facilities Element - G-1, G-2

### Compliance Regulations

California Administrative Code, Title 14, Division 7, Chapter 3  
Orange County Solid Waste Management Plan  
California Environmental Quality Act  
City of Irvine CEQA Procedures





## ENERGY ELEMENT

The Energy Element provides a basis for long-range energy planning within the City. The purpose of the Energy Element is to summarize information and state local public objectives which, when implemented, will result in efficient energy consumption by the City and its residents, businesses, and industries. This element is optional under California law. A technical report containing information on Irvine's current and projected energy supply/demand is included as an appendix to the General Plan. The Energy Element is an optional element which if be included in local general plans must be implemented (California Government Code 65303).

### Description of Energy and Energy Sources

Energy is defined as anything that makes it possible to do work and anything capable of bringing about movement against resistance. The utilization of energy depends upon the availability of sources and development of the technological skill to use them. Energy is commonly supplied by non-renewable sources such as petroleum fuels and natural gas. Other types of energy sources, including solar, wind, hydroelectric, and geothermal are called renewable sources.

The most common unit for measuring energy is the British Thermal Unit (BTU). It is the energy necessary to raise one pound of water one degree Fahrenheit. BTU measurement is used to compare various energy consumption.

The most prevalent forms of energy supply in California are petroleum fuel, natural gas and electricity. Petroleum fuel consists primarily of gasoline and diesel fuels and is measured in gallons (12,500 BTU/G). Natural gas, like petroleum, is found in large underground fields and is measured in cubic feet (1,050 BTU/CF). Electricity is generated by power plants which are powered by primary sources including petroleum, natural gas, coal, moving water (hydroelectric) nuclear fuel, and geothermal steam. Electricity is measured in kilowatt hour (3,413 BTU/Kwh at point of use).

Nonrenewable energy sources are vulnerable to interruption and price fluctuation. In addition, the by-products from the conversion of nonrenewable sources to energy are harsh on the environment. Air pollution, water pollution, and acid rain are some examples of undesirable by-products. Such concerns are not associated with most renewable sources. The energy crisis of the 70's demonstrated the problems associated with relying solely on non-renewable sources. Substituting renewable for nonrenewable sources will reduce the chance of a future energy crisis. Energy conservation will also aid in avoiding future energy crises. This conservation can be accomplished through reduced consumption, increased efficiency, and changes in individual behavior.

### Existing Conditions

#### 1. Supply

The present sources of Irvine's energy are nonrenewable. The use of renewable sources such as solar, wind, and geothermal are increasing in California, but have not, as yet, been significant in Irvine. Oil companies supply petroleum fuels to Irvine as to other California communities. In 1980, 50% of the crude oil was supplied from



California sources and only 16% was supplied from sources out of the United States. The primary supplier of retail natural gas to Irvine is the Southern California Gas Company (SCG). The major wholesale source for SCG is the El Paso Natural Gas Company. The Southern California Edison Company (SCE) supplies Irvine's electricity. SCE's electricity is generated from a combination of oil, natural gas, hydroelectric, nuclear, and renewable sources (wind and solar). The major primary source of SCE electricity is from oil and natural gas (67%).

## 2. Consumption

Irvine's energy is consumed by residential, commercial, industrial, agricultural, and transportation uses as shown in the following table. The table does not include government energy consumption because of the lack of utility sales data. However, in 1980, Irvine allocated \$539,120 for energy consumption in municipal buildings and facilities.

IRVINE'S CURRENT ENERGY CONSUMPTION  
1980  
(BTU x 10<sup>9</sup>)

	<u>Electricity</u>	<u>Natural Gas</u>	<u>Liquid Fuel</u>	<u>Total Amount</u>	<u>%</u>
Residential	1,456	1,442	-	2,898	23.2%
Commercial	2,793	822	-	3,615	28.9%
Industrial	2,249	937	-	3,186	25.5%
Agricultural	315	1	-	316	2.5%
Transportation	-	-	2,496	2,496	19.9%
TOTAL:	6,813	3,202	2,496	12,511	100.0%

Source: See the technical appendix, Section III "Energy Demand".

The commercial sector is the major electric energy consumer in Irvine. Natural gas is mostly consumed by the residential sector. Transportation is the only major end user of liquid fuels. Overall, the commercial sector is the greatest energy consumer in Irvine. Residential and commercial energy "end use" consumption is also calculated to target specific end uses for conservation measures, as shown in the following table:

# PERCENTAGE END USE ENERGY CONSUMPTION

	Residential		Commercial	
	<u>Electricity</u>	<u>Natural Gas</u>	<u>Electricity</u>	<u>Natural Gas</u>
Space heating	3.9	58.1	1.0	53.8
Space cooling	2.2	-	36.4	7.2
Water heating	7.2	27.6	1.0	5.3
Cooking	4.4	6.5	.1	.8
Refrigeration	24.6	-	4.0	.8
Lighting	33.5	-	49.0	-
Other (pool, T.V., dryer, etc.)	24.2	7.8	8.5	32.1
TOTAL:	100.0	100.0	100.0	100.0

Source: See the technical appendix, Section III "Energy Demand".

Lighting and space heating are the principal end users of electricity and natural gas in the residential and commercial sectors.

## Trends

### 1. Supply

The Energy Element assumes that the existing mix of supply will continue as the dominant source of Irvine's energy through 1990. Some renewable energy sources, such as solar water heating, will replace existing sources, but will not significantly change the future mix of Irvine's supply.

As the use of nonrenewable sources continues, energy prices will rise. From 1970 to 1980, the price of crude oil increased from \$1.50 to \$30.00 per barrel. Between 1975 and 1980, the price of natural gas almost doubled for residential and tripled for commercial sectors and the price of electricity almost doubled for all sectors.

### 2. Consumption

Irvine's future energy consumption has been evaluated based on two scenarios: a) the "base case" assumes that the existing energy consumption pattern continues without conservation and that the energy consumption increases in proportion to the change in building stock and/or population growth; b) the "conservation case" assumes that energy conservation measures and renewable sources are implemented.

The principal rationale behind the conservation case is the strong enforcement of the State's Title 24 Building Code standards and the City's Energy Element voluntary objectives and implementing actions. The State Standards are strictly enforced in the City of Irvine. The following table illustrates the 1990 sectoral energy consumption for the base and conservation cases. The difference between the two cases results in energy savings (in constant dollars) that the Energy Element objectives are to achieve.



PROJECTED ENERGY CONSUMPTION AND DOLLAR SAVINGS  
1990

	"Base Case"		"Conservation"		Dollar Savings
	<u>BTU x 10<sup>9</sup></u>	<u>%</u>	<u>BTU x 10<sup>9</sup></u>	<u>%</u>	
Residential	6,087	21.4	4,192	20.4	13,403,306
Commercial	12,473	43.9	8,357	40.7	31,887,312
Industrial	6,691	17.8	5,346	19.7	8,962,693
Agricultural	351	1.3	176	.9	1,385,225
Transportation	4,418	15.6	3,756	18.3	13,573,307
TOTAL:	30,020	100.0	21,827	100.0	69,211,835

Source: See the technical appendix, Section III "Energy Demand".

The commercial sector will remain the major energy consumer and potentially the largest energy saver in Irvine until 1990. Irvine's total potential dollar savings is approximately \$69 million.

#### Identification of Issues

1. Energy prices are projected to increase for natural gas and for electricity, resulting in higher energy costs for Irvine's residents, businesses, industries, and municipal operations. What action can the City take to mitigate the impact of rising energy costs?
2. The City is vulnerable to energy supply disruptions because it depends on non-renewable energy supplies which are not responsive to local control. How can the City reduce the vulnerability and increase the use of locally available resources?
3. Regional energy policy planning, such as transportation planning, requires local government input and involvement. How might the City influence regional policies to serve local residents and businesses more effectively?
4. The public lacks knowledge of energy programs and regulations. How can the City inform the public of existing and future potential energy programs and regulations?
5. Incentives are available for encouraging voluntary energy retrofit of buildings. In what ways might the City encourage public acceptance of energy retrofit programs?
6. The City is vulnerable to energy shortages. How can the City maintain its services to protect the public health and safety during energy shortages?
7. What services can the City provide to implement energy programs and promote the use of alternative renewable energy sources?

## Response To Issues

Development of a General Plan Energy Element was initiated in 1977 and was designated as General Plan Amendment (GPA-0009-B) in 1980. An Energy Advisory Committee was appointed by the City Council, to assist staff in developing the Energy Element. This element is the result of a close working relationship between the City staff and the Energy Advisory Committee. The following goal, objectives, and implementing actions respond to the identified issues:

GOAL I

ENERGY ELEMENT

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Promote energy conservation and the use of renewable energy sources throughout the City.

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To achieve this goal, the City of Irvine has adopted the following objectives and implementing actions. It is understood that measures proposed shall be examined for cost-effectiveness and compliance with applicable City standards.



## OBJECTIVE I-1 ENERGY CONSERVATION

Maximize energy efficiency within the City through land use and transportation planning.

### Implementing Actions:

- a. Incorporate the following or comparable design features, to the extent feasible, in developments at time of concept plan, subdivision, or site design review:
  - As a guideline, a majority of the local street patterns should be aligned in an east/west direction to provide optimum solar access and natural ventilation.
  - Building orientation which maximizes solar access, natural ventilation, and which minimizes conflicts of solar access with adjacent structures or properties.
  - Energy efficient landscaping (water conserving plants, indigenous vegetation, and use of on-site water run-off).
  - Landscape plans, as required for development case review, should encourage plant types and irrigation systems which minimize water usage.
  - Landscaping which provides cooling opportunities during summer and which minimizes conflicts with solar access during winter.
  - Cluster and/or planned unit development.
  - South slope utilization in hillside development.
  - Require cut-off or directional lighting fixtures to be used to direct light only to desired areas and to reduce glare. Light-sensitive biotic areas should be protected from glare caused by outdoor lighting fixtures.
  - If determined necessary through project review, a wall or fence combined with vegetation screening shall be constructed between light-sensitive areas and adjacent urban development. Similar measures should be taken wherever light and glare might produce adverse impacts upon light-sensitive biotic areas.
  - Encourage landscapes be designed and managed in a manner to account for energy and resource use.
- b. Encourage and promote incorporation of energy conservation measures at time of conditional use permits and site designs. The measures should be developed in conjunction with the applicant and may include:
  - Active solar water and/or space heating.
  - Passive design features for heating and cooling.
  - Use of energy efficient devices.

- c. Encourage development of shared energy facilities in major commercial projects where cost effective, such as:
  - District wide heating/cooling system.
  - Solar water heating.
  - Photovoltaics.
- d. Develop guidelines establishing architectural and aesthetic controls for solar devices. Guidelines should provide reasonable controls while maintaining cost effectiveness of devices or systems.
- e. Facilitate the participation of industries in the following conservation programs where cost effective:
  - Cogeneration (process heat/steam/electricity).
  - Reclaiming waste products (biomass, solid waste, waste water).
  - Recycling (aluminum, paper, glass and steel).
  - Car pooling.
- f. Require developers of major commercial or industrial facilities who develop a transportation management plan to address such measures as:
  - Flex time and/or shifting work schedules to avoid peak traffic.
  - Employee car pools and van pools.
  - Preferential and free parking for car poolers and van poolers.
  - Ridesharing programs (e.g., IBC Program).
  - Shuttle services from regional transportation (e.g., rail/bus) stations to final destination.
  - Subsidies for transit passes.
  - Locker room facilities for employees (e.g., for bicyclists).
- g. Promote use of alternative modes of transportation in the City by the following programs:
  - Encourage use of regional public transportation (e.g., rail service) by:
  - Supporting the development of regional transportation stations in Irvine.
  - Making schedules available at City Hall and other public agencies.
  - Requesting OCTD to establish and provide information on bus connection for regional transportation passengers.

- Encourage use of the bus system within the City by working with OCTD to provide:
  - Bus circulation between residential, commercial and industrial uses.
  - More efficient transfers between bus routes.
  - Posted schedules at bus stops.
  - Widely distributed bus schedules.
  - Shuttle services from regional transportation stations to final destination.
  - Encourage use of public transit and ridesharing by promoting and participating in public information programs aimed at schools, sports clubs and other institutions and organizations.
- h. Continue implementing the City program to synchronize traffic lights
- i. Monitor the Federal, State, regional, other local governments, the utility companies, Irvine Ranch Water District (IRWD), and other private and public agencies' energy programs and regulations and:
- Explore opportunities and limitations on use of renewable sources in the City.
  - Obtain information and technical assistance for the City's energy programs.
  - Implement Federal and State Energy Programs (e.g., Residential Conservation Service [RCS]).
  - Support continuation of tax credits for alternative renewable sources and conservation measures.
  - Allocate available Federal funds and grants such as CDBG, and Solar Bank for energy programs for low income and senior housing projects.
  - Inform developers and the general public of recent available energy programs, regulations, technical, and economic data (e.g., cost effectiveness).

## OBJECTIVE I-2 RETROFIT PROGRAMS

Promote energy savings in buildings constructed prior to 1978.

### Implementing Actions:

- a. Encourage voluntary retrofit energy programs for residential, commercial and industrial buildings including energy conservation measures such as:
  - Residential retrofit measures.
  - Ceiling and wall insulation.
  - Weather stripping, sealing and caulking.
  - Low flow shower head.
  - Water heater tank insulation.
  - Duct insulation.
  - Air conditioning recycling devices.
  - Computer controlled thermostats.
  - Commercial retrofit measures.
  - Ceiling and wall insulation.
  - Weather stripping, sealing and caulking.
  - Shading controls (e.g., overhangs).
  - Lighting controls.
  - Thermostat controls (summer and winter).
  - Optimum HVAC scheduling.
  - Industrial retrofit measures.
  - Operating and maintaining equipment at peak performance.
  - Maintaining furnaces.
  - Adjusting lighting.
  - Plugging leaks in heating and cooling process.
- b. Support the voluntary retrofit energy programs by considering the provision of the following:



- An energy efficiency rating system for identifying the needed type of retrofit measures.
  - Information to the Chamber of Commerce, realtors, building contractors, homeowners, apartment owners and consumers on retrofit measures' installation, cost-effectiveness, tax credits, financing assistance, and other agencies' energy programs.
- c. Promote the voluntary residential retrofit energy program by encouraging homeowners' associations to do the following:
- Purchase bulk solar systems and conservation materials.
  - Sponsor buying clubs, cooperative or other suitable mechanism to purchase, install, and maintain retrofit measures.
- d. Provide technical assistance for homeowners for the installation of active solar systems, such as information on optimal orientation and building code requirements.
- e. Work closely with the utility companies and the Chamber of Commerce, schools and other public entities in support of energy reduction programs, and dissemination of information regarding these programs.
- f. Consider increasing public information regarding energy programs by:
- Mailing energy consumption and conservation data to homeowners' associations.
  - Displaying energy information in local shopping area and community centers, City, and other public (UCI) libraries.
  - Publishing energy information in local newspapers.
  - Incorporating energy information in city schools, Irvine Valley College and UCI programs.
- g. Provide homeowners' associations and the general public with available information on:
- Renewable energy sources, conservation measures, and technical and economic data (e.g. cost-effective analysis).
  - Consumer protection issues and programs.

## OBJECTIVE I-3 MUNICIPAL CONSERVATION

Maximize energy efficiency of the City's facilities and operations by use of renewable sources and conservation measures.

### Implementing Actions

- a. Develop a comprehensive energy management program to reduce energy consumption for municipal facilities and operations including:
  - Public buildings and facilities.
  - Street lighting.
  - City vehicle fleet management.
  - Appliance/equipment procurement.
  - Employee energy awareness program.
- b. Incorporate the commercial retrofit conservation measures in municipal facilities where reasonable.
- c. Use the following renewable sources for municipal facilities where cost effective:
  - Solar water and pool heating.
  - District heating system.
  - Photovoltaics.
  - Cogeneration.
- d. Establish a fund for improving energy efficiency of municipal facilities, and reinvest up to 50% of energy savings for implementing the actions of this energy element.
- e. Develop an energy plan coordinated with utilities, local and regional government agencies.
- f. Consider establishing a City energy service/coordinator with adequate support to promote, implement and administer the Energy Element.

### Standards

(Reserved)

### Related Objective Numbers

Land Use Element - A-1, A-2

Urban Design Element - B-1, B2

Housing Element - C-3

Circulation Element - D-1, D-3, D-4, D-5, D-6, D-7

Noise Element - F-1  
Waste Management Element - H-1  
Conservation and Open Space Element - I-1, I-4

### Compliance Regulations

#### 1. Federal

Energy Policy and Conservation Act of 1975  
National Energy Act (NEA) of 1978  
National Energy Conservation Policy Act (NECPA) of NEA 1978  
Public Utilities Regulatory Policies Act (PURPA) of NEA 1978  
Power Plant Industrial Fuel Use Act (PIFUA) of NEA 1978  
Federal Solar Energy Tax Credits (effective 1977)  
Federal Residential Conservation Tax Credits (effective 1977)  
Energy Security Act (ESA) of 1980  
Solar Energy and Energy Conservation Bank of ESA 1980 (effective 1982)

#### 2. State

Title 24 State Building Code Standards (effective 1978)  
Solar Rights Act (effective 1979)  
Solar Shade Control Act (effective 1979)  
Subdivision Map Act Section 66473.1 of Solar Rights Act of 1979  
California Solar Energy Tax Credit (effective 1977)  
California Conservation Tax Credit (effective 1981)  
Solar System Property Tax Exemption (effective 1981)  
Accelerated Depreciation (effective 1980)  
Waste Product Tax Exemption (effective 1981)  
Joint Powers Act (effective 1980)  
Stream Line Process established for Geothermal, Cogeneration, and Coal  
Classification Power Plant (effective 1981)  
Gasohol Tax Exemption (effective 1981)  
Small Alternative Energy Business Loans (effective 1981)  
California Alternatives Energy Sources Financing Authority (effective 1981)  
Biomass Demonstration Project (effective 1980)  
Agricultural Forestry Residues Sources (effective 1980)  
Senate Bill 3048 (approved 1980) - Explore the use of methanol and ethanol in motor  
vehicle fleets  
Assembly Bill 2976 (approved 1978) - Accelerate wind commercialization  
State Assistance Fund Energy Business Industrial Development Corporation Act  
(SAFE-BIDCO) of 1978  
Environmental Quality Act (CEQA) of 1970

#### 3. City

Codes of Ordinances Title VI  
Chapter 5 - Subdivision Requirements, Energy Conservation, Section V.F-511  
Chapter 6 - Housing Code, Sections 401 & 701  
Chapter 11 - Uniform Solar Energy Code, Section 601  
Zoning Ordinances  
CEQA Procedures







## SAFETY ELEMENT

The Safety Element provides a framework that can be utilized to introduce and formalize safety considerations into the planning and development process. A primary concern of this element is the protection of the community from aircraft operations, fires, floods and geologic hazards. The Safety Element is a required element of local general plans (California Government Code 65302(g)).

### Description of Safety

Community safety can be defined as City sponsored actions that can reduce the potential for loss of life, injuries, and property damage associated with natural and man-induced hazards. Safety can be further defined to describe the source of potential hazards and civic agencies responding to those hazards. The potential hazards most prevalent in the City of Irvine are from fires, floods, geologic hazards, and aircraft operations.

The seismic element of this general plan identifies seismic hazards and policies to minimize them. Both the seismic and safety elements should be considered together in the planning process for the provision of a safe environment.

#### 1. Fires

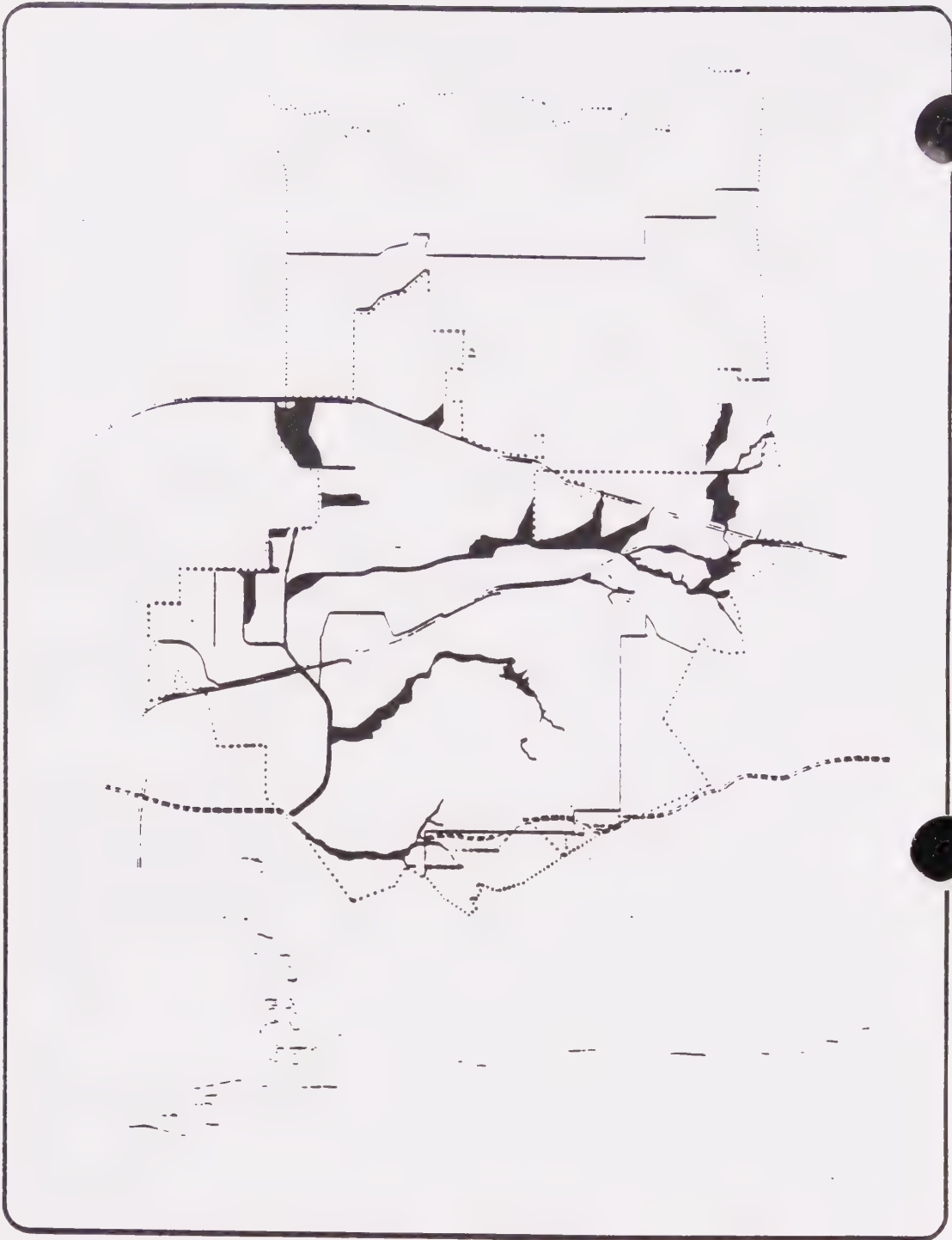
Fire hazards (Figure J-1) are evident in the study area due to large quantities of combustible vegetation, poor access to fire hazard areas, and lack of water supply for fire protection in fire hazard areas. Special fire protection considerations should also be given to industries handling hazardous materials, multi-story buildings with high occupant levels, and large built-up areas with combustible roof covering. High hazard areas are predominantly in the hilly portions of the City with volatile chaparral as the fuel source.

#### 2. Floods

Figure J-1 shows areas subject to the theoretical 100 year flood within the planning area. The figure was based on information prepared by the U.S. Department of Housing and Urban Development (HUD). According to this information, flood waters are expected to be shallow with depths that do not exceed three to four feet even in the case of a 100 year flood. Historical documents show that damaging floods occurred in the Los Angeles Basin in 1884, 1916, 1927, 1937, 1938, and 1969. The last one included the inundation of the lowlands in the Santiago Hills, El Toro, San Joaquin Marsh, and Upper Newport Bay areas.

#### 3. Geologic Hazards (Soils)

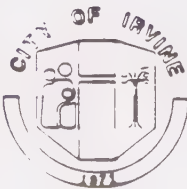
The U.S. Department of Agriculture maps classify soils with respect to their suitability for urban development, resource conservation, and agriculture. Soil limitation ratings relate to the soil's capacity to support load and resist settlement, as well as the ease of evacuation. A rating of "slight" refers to soil properties which are favorable for construction. A "moderate" rating means that some soil properties are unfavorable, but that they can be overcome or modified by special planning and design. Soils identified as having "severe" limitations are those so



# FIRE AND FLOOD HAZARD AREAS

== HIGH FIRE SEVERITY RATING

■ FLOOD HAZARD AREAS



----- COURSE OF THE RIVER

FIG. J-1

FIG. J-1

unfavorable and so difficult to correct as to require major soil reclamation or special design. It should be noted that these soil limitations are general. They are intended to be used as a planning aid which identifies areas requiring specific site investigations to confirm the existing conditions and recommend corrective measures necessary to reduce potential hazards. The most recent survey of the Irvine planning area was conducted in 1975.

#### 4. Aircraft Operations

The risk of aircraft crashes is an important consideration in planning around airports, particularly military bases where pilots are trained to use high performance jet aircraft. The size of the area affected by a crash and the ability to predict its impact and location varies with the type of aircraft. Most problems are expected to occur within normal flight patterns. However, a disabled aircraft may choose to take a straight-in approach to any runway.

#### Existing Conditions

The two primary civic agencies which respond to safety hazards are police and fire departments. The City of Irvine maintains a central police facility in Planning Area 14. Booking and detention facilities are provided under an agreement with the County of Orange. Through the use of existing facilities, the Orange County Fire Department and State Forestry Service provide cooperative fire and rescue service for the significant fire hazard areas depicted in Figure J-1. The City also has a contract with the Orange County Fire Department for fire fighting services within the City.

Additionally, for developed or developing areas, the City has minimized potential hazards by requiring appropriate mitigation measures. The following is a brief synopsis of those measures for each hazard.

##### 1. Fire

The County Fire Department can provide a five minute response time within most areas of the City. For residential development which is outside of a 7 minute response zone, residences are required to have 1) smoke detectors, 2) automatic fire sprinkler systems, 3) fire retardant building materials, and 4) traffic signals which can be pre-empted to ease access by fire trucks or assist with evacuation. These requirements are imposed as part of the development review process. The City's building code requires smoke detectors in all new residential developments.

##### 2. Flood

Currently developed areas within the City are not subject to the 100 year flood as drainage measures, such as channels, drains, etc., have been put in place where structures are threatened.

##### 3. Soils

Like floods, structures are not threatened by geologic problems due to the fact that corrective engineering techniques are effected during build-out.



#### 4. Aircraft Operations

Three airports are located adjacent to the City of Irvine. John Wayne Airport is along the City's western border just south and west of the Irvine Business Complex. It provides commercial jet service and has a considerable amount of light aircraft traffic. MCAS Tustin is used for training helicopter pilots. MCAS El Toro, located northwest of Irvine Industrial Complex-East, has a full-size airfield for training jet fighter pilots. Figure J-2 shows aircraft crash hazard zones for El Toro Marine Base. These zones establish areas where the risk of a crash for a certain unit of land area is approximately four to five times as great in each successive impact zone. Thus, an acre of land in Zone A, the zone of highest crash hazard, is expected to have approximately 4 to 5 times the risk of a crash as an acre of land in Zone B, and 16 to 20 times the risk of a crash as an acre of land in Zone C. Figure J-3 shows suggested criteria for land uses in the crash hazard zones. Any final determination with respect to the establishment of land use controls should be based on more detailed studies. These studies should use actual operations as their bases.

#### Trends

##### 1. Fires

The fire hazard areas are expected to remain hazardous until development encroaches in the hilly areas. As development takes place, probable partial removal of the fuel source will decrease fire potential. However, the proposed densities for the fire hazard areas are low, requiring less grading of natural terrain than higher densities. This means that while fire hazards are reduced, they will not be removed to the extent as they are in the City's flatland areas.

##### 2. Floods

It is expected that future developments will be protected from 100 year floods by the continuation of measures which alleviate flood hazards, such as channels, retention basins, and drains.

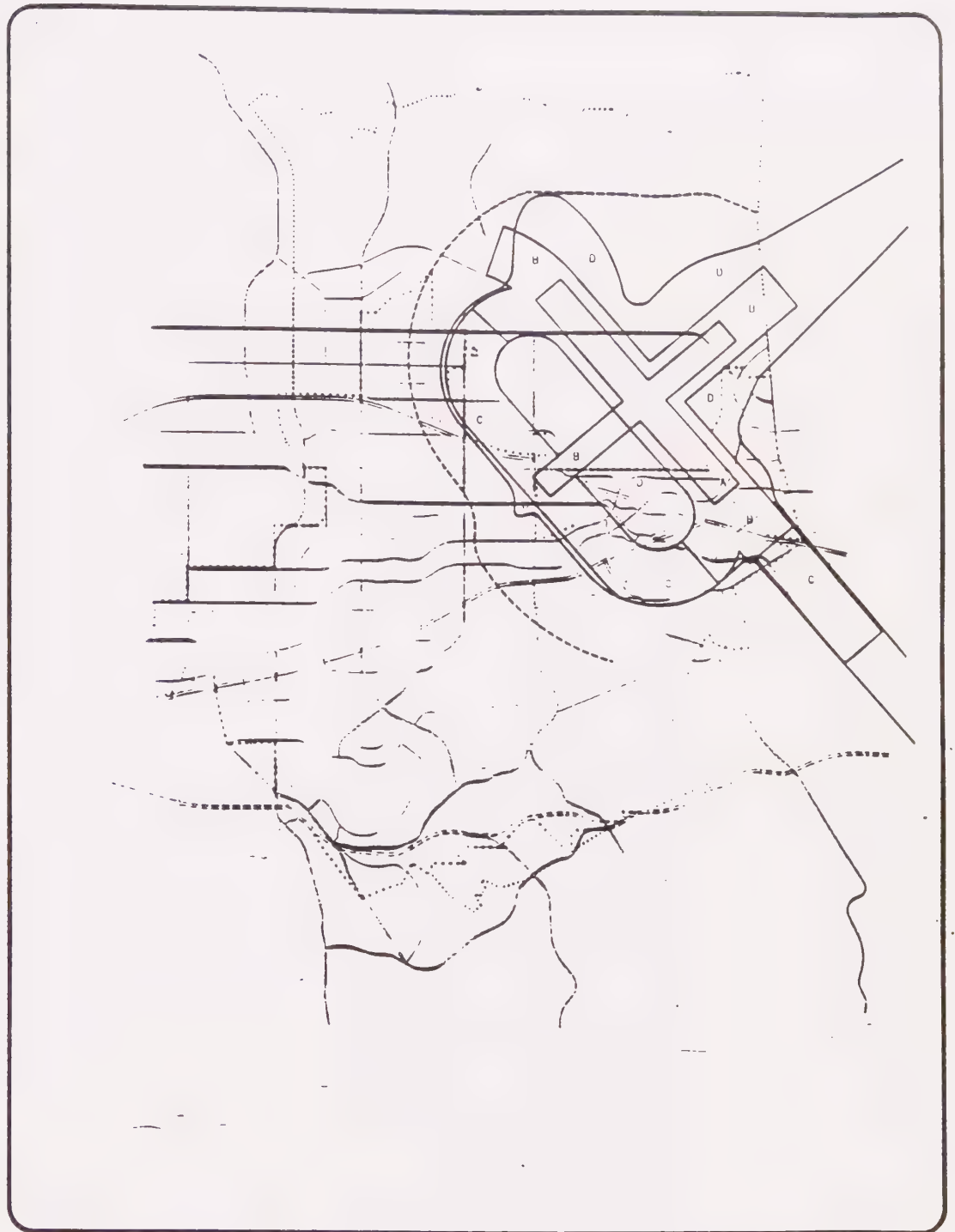
##### 3. Soils

Soil types will remain almost virtually unchanged over the time. It is expected that development will continue to incorporate engineering techniques to correct soil problems.

##### 4. Aircraft Operations

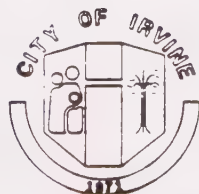
It is expected that within the near future, aircraft operations will continue from the three nearby facilities. The crash hazard potential should remain constant as outlined in existing conditions unless the operations are changed. Long term impacts are hard to ascertain due to the constantly changing technology of the air industry, as well as the long term commitments of the facility operators of staying in the area.

The City is expected to provide police services in line with development. The development pattern and topography evident in Irvine might require that consideration be given



## AIRCRAFT CRASH HAZARD ZONES

- "A" EXTREME CRASH HAZARD
- "B" CONSIDERABLE CRASH HAZARD
- "C" LIMITED CRASH HAZARD
- "D" MINIMAL CRASH HAZARD
- SCHOOL CONSTRUCTION LIMIT



..... SPHERE OF INFLUENCE

..... CITY BOUNDARY

FIG. J-2



FIG. J-2

# LAND USE SUITABILITY IN AIR SAFETY ZONES

FIGURE J-3

	Minimal Hazard	Low Hazard	Intermediate Hazard	Extreme Hazard
Residential Single Family, Duplex, Mobile Homes	A	C*	D	D
Residential Multiple Family	A	D	D	D
Transient Lodging	A	D	D	D
School Classrooms, Libraries, Churches	A	D	D	D
Hospitals, Nursing Homes	A	D	D	D
Auditoriums, Concert Halls, Music Shells	A	D	D	D
Sports Arenas, Outdoor Spectator Sports	A	D*	D*	D
Playgrounds, School Outdoor Parks	A	B	C	D
Golf Courses, Riding Stables, Water Recreation, Campgrounds	A	A	B	C
Office Buildings, Personal, Business and Professional	A	D*	D*	D*
Commercial Retail, Movie Theaters, Restaurants	A	D	D	D
Commercial Wholesale, Super Retail, Fuel, Mfg. Utilities	A	C	D	D
Livestock Farming, Aquaculture, Breeding	A	A*	B*	C*
Agriculture, Except Livestock, Mobile, Fishing	A	A	A	B
Public Right of Way	A	A	B	C
Extensive Natural Recreation Areas	A	A	A	A
Maximum Gross Density Recommended, Persons/Acre	No Limit	10	2	5
Maximum Assured Recommended, Persons/Acre	No Limit	100	25	10

AIR SAFETY ZONES

A	Highly Acceptable
B	Normally Acceptable
C	Somewhat Unacceptable
D	Highly Unacceptable

\* Some specific uses in this group may meet density criteria and be more acceptable

SOURCE: Wiley & Ham



to the type of patrols used. It may be necessary to modify current standards because many of Irvine's neighborhoods are designed with interior open spaces and greenbelts which make automobile patrol less effective. Furthermore, the rugged terrain in some portions of the planning area may require use of 4-wheel drive vehicles or horses to patrol them.

#### Identification of Issues

The following is a summary of the major safety issues in the City of Irvine:

1. The risk of aircraft crashes is an important consideration around airports. Three airports are located adjacent to the City. How can the City reduce the risk to life and property associated with aircraft operations adjacent to the City?
2. The potential for hazards can be minimized through predevelopment planning. How can the City reduce the probability of fire, non-seismic geologic, flood, and air operation hazards?
3. Despite any precautions a jurisdiction takes, natural disasters will occur. What actions can the City take to reduce the severity of hazards (i.e., reducing the loss of life and personal property) when they occur?

#### Response to Issues

Many potential hazards can be negated through recognition of unsafe conditions and measures to correct those conditions. In the event a disaster does occur, the City should provide the focal point for disaster preparedness. The following goal, objectives and implementing actions have been formulated in response to the issues.



GOAL J  
SAFETY ELEMENT

---

Minimize the danger to life and property from man-made and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards, and air operations hazards.

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To achieve this goal, the City of Irvine has adopted the following objectives and implementing actions:

## OBJECTIVE J-1 HAZARD OCCURRENCE

Identify actions that the City, in concert with other jurisdictions, must take to reduce the probability of hazard occurrence.

### Implementing Actions:

- a. Through land use controls regulate the type and intensity of development in areas associated with potential land use and air operational hazards. To help facilitate this implementing action, Figures J-1 and J-2 should be used as guidelines in determining locations of hazardous areas.
- b. Utilize zoning provisions to require geologic testing and structural modification in areas with slope instability and landslide possibility.
- c. Establish criteria for land development in hillside areas with emphasis on fire retardant materials, minimization of exposure risk to wildfire and adjacent structure fires, access for fire fighting personnel and equipment, and removal of combustible vegetation.
- d. In accordance with the Memorandum of Understanding between the City and Marine Corps Air Station El Toro, and consistent with City Council Resolution 86-54, the City shall use the most current available Marine Corps certified Air Installations Compatible Use Zones (AICUZ) Study, as a planning resource for evaluating aircraft operations, land use compatibility and land use intensity.
- e. Require development proposals be reviewed by the Orange County Fire Department to ensure adequate fire protection and precautions occur.

## OBJECTIVE J-2 DISASTER RESPONSE

Identify actions that the City, in conjunction with other jurisdictions, must take to reduce the severity of hazards should they occur.

### Implementing Actions:

- a. Through the capital budget, operating budget, and residential development approvals, ensure that developments will be properly served by police and fire services.
- b. Through the zoning and subdivision ordinances ensure that each development will have adequate emergency access.
- c. Through the Zoning Ordinance, phase the timing of development in relation to the City's ability to provide police and fire service.
- d. Continue to maintain and implement the City of Irvine Emergency Plan.

### OBJECTIVE J-3 INSURANCE PROGRAMS

Qualify for the national flood and other disaster insurance programs.

#### Implementing Actions:

- a. Support legislation and tax measures which tie disaster insurance and tax rates to hazard reduction measures.
- b. Require pre-wired cable TV connections for fire and police alarms in all new residential structures and other appropriate buildings.



## Standards

(Reserved)

## Related Objective Numbers

Land Use Element - A-1  
Urban Design Element - B-2  
Housing Element - C-2, C-3, C-5  
Circulation Element - D-8  
Public Facilities Element - G-1, G-2  
Conservation and Open Space Element - L-1, L-3, L-4  
Seismic Element - M-1, M-2

## Compliance Regulations

City of Irvine Building Code  
City of Irvine Subdivision Ordinance  
City of Irvine Zoning Ordinance  
California Environmental Quality Act and Implementing Regulations  
Memorandum of Understanding between the City and USMC  
FAA, part 77 regulations  
City of Irvine Security Code  
Airport Environs Land Use Plan, Orange County





## PARKS AND RECREATION ELEMENT

The purpose of the Parks and Recreation Element is to establish guidelines for the orderly development of Irvine's park system and recreation facilities. State planning legislation does not require a General Plan Element for Parks and Recreation, but provides for discussion of this subject in two other mandated elements, namely Land Use and Open Space. However, recognizing the important functions served by parks and recreation facilities in a growing urban environment, the City of Irvine has chosen to expand this subject into a separate element. The Parks and Recreation Element is an optional element which if included in local general plans must be implemented (California Government Code 65303).

### Description of Parks

A park is defined as any public or private land set aside for aesthetic, educational, recreational, or cultural use. It is related to open space, which is all land and water in an urban area not covered by buildings.

The City of Irvine's public park system is divided into two park categories: neighborhood parks and community parks. In addition, Irvine has private neighborhood (homeowner association) parks and regional parks.

A neighborhood park, whether public or private, is intended to serve local residents and should be within walking distance of the households it serves. Beyond this point, public and private neighborhood parks differ in specific function and design.

A public neighborhood park ranges in size from 5 to 12 acres, excluding off-street trails, greenbelts, and school lands. When possible, neighborhood parks adjoin public elementary schools and serve a minimum of 2,500 people each. Primary uses include passive open space, active play areas for children, including tot lots, playground apparatus, and picnic areas.

Private neighborhood parks in Irvine are typically smaller than public neighborhood parks. With a few exceptions private parks range in size from .3 to 5 acres, excluding greenbelts, trails, windows, setbacks, or village edges. Generally, private parks are placed in the interior of residential developments or condominium complexes rather than on public streets. They are designed to exclusively serve residents belonging to the specific association, and are more intensely developed and adult oriented. Primary uses include swimming pools, spas, club houses, and tennis courts. These facilities are sometimes found in addition to passive open space and active play areas, as found in public neighborhood parks.

A community park is designed to serve more than one planning area. These parks vary in size but are generally 20 acres excluding greenbelts, trails, and adjoining school lands. A community park may provide joint-use with a secondary school, through siting and design features. These parks are planned to meet the needs of all age groups by providing a wide variety of land uses, including swimming pools, playing fields for team sports, recreation centers, cultural centers, picnic areas, gardens, and similar uses.



Regional parks are large open space and recreational facilities provided either partially or wholly by the County of Orange. Regional parks are a component of the City's Conservation and Open Space Element. They include such uses as golf courses, lakes, hiking trails, athletic fields, picnic facilities, campgrounds, swimming pools, and wildlife refuges. Though located within the City, either presently or in the future, regional parks serve the needs of persons throughout Orange County, as well as Irvine citizens.

Recreation and leisure opportunities are available to the residents of Irvine because of its location in the south Orange County region. Public beaches, local mountains, and deserts are all within short traveling distance from Irvine. Southern California is also the location of several world famous amusement parks, such as Disneyland and Knott's Berry Farm. Movie theatres, arcades, bowling alleys, skating rinks and miniature golf courses are just a few of the many recreational options available in the City and the region.

### Existing Conditions

Historically, the City of Irvine has acquired its parkland and recreational facilities as follows: neighborhood parks have been dedicated by developers at 4.5 acres per 1,000 population or in-lieu fees, and community parks have been purchased through a park bond at 2.0 acres per 1,000 population. In addition, the City has given park dedication credit for private parks and various recreational facilities.

The amount of park land required for dedication is established at the time of subdivision approval through the implementation of the Irvine Subdivision Ordinance (formerly known as the Park Code). The Subdivision Ordinance establishes park credit standards and provides for any exceptions for dedication. For example, if a developer proposes a project for low and moderate income households, he may apply for a "park modification" which has provided for a reduction in dedication to 2.0 acres per 1,000 population or in-lieu fees. This dedication policy exception is also contained in the City of Irvine Housing Element under incentives. The park modification process is among several incentives used by the City to encourage developers to construct lower income dwelling units.

This system of park dedication and purchase has provided the City with the following inventory of parks. Irvine has 18 public neighborhood parks with an average size of 3.6 acres. There are approximately 90 private neighborhood parks with an average size of 2.3 acres. Irvine also has 7 community parks and 2 additional park sites which are not yet developed. The most common size of a community park is 20 acres.

Mason Regional Park is currently being expanded by the County to provide recreational and open space facilities for the general public. When fully developed, facilities may include a golf course, lakes, hiking trails, athletic sports fields, picnic facilities, and swimming pools.

Since the inception of the City's original method of park dedication under the Quimby Act, several legislative and economic trends have evolved. In September 1982, the State Legislature passed Senate Bill 1785 which limits the amount of park land or in-lieu fees which Irvine may require in developer dedication to 5.0 acres per 1,000 population. Although this is .5 acre more than the original dedication requirements, it is 1.5 acres less than the original total park provision standard. In order to maintain that standard, the City would have to purchase 1.5 acres per 1,000 population. As a result of Proposition 13, however, the City no longer receives past levels of property tax revenues, which were important for park improvements and maintenance. Moreover, it is more

difficult to gain voter approval of bonds, which had previously been used for the purchase and improvement of community park land. Therefore, it does not appear likely that the City can purchase the extra 1.5 acres per 1,000 population.

Inflation in land costs has also affected the type of parks and facilities offered for dedication. In the past, developers have satisfied their dedication requirements by paying in full with land. In addition, they have often provided extra amenities such as greenbelts, design features, tennis courts, and swimming pools for which they did not apply for park credit. However, the recent trend has been to pay in facilities and fees rather than land alone, requesting that extraordinary amenities and design features be credited toward park requirements. This trend has resulted in a reduction in actual park land below the established standard. However, the City will continue to attempt to gain voter approval of funding to make up for any shortfall of park land.

Finally, due to inflation and the reduction in tax revenue, the City has experienced sharp increases in park and recreation maintenance costs as well as lack of adequate maintenance funds. Given present revenue levels, the City may find it difficult to continue park maintenance at current performance levels.

### Trends

Irvine's population make-up has changed considerably since the City's original General Plan was adopted in 1973. The size of the average Irvine household has decreased from 3.44 persons to 2.66 persons in 1982. There are fewer young children and an increase in the number of citizens 65 years and older. It is expected that the trend towards smaller families and the increase in the senior population will continue. As time passes, Irvine, like many older communities, will go through a series of "life cycles." For example, a neighborhood which now has primarily families with young children may evolve to one with mature adults whose children have grown and left home.

Just as Irvine's demographics have changed, so also have its recreation demands. Due to a decrease in the number of young children, there is less demand for playgrounds or tot lots. On the other hand, older children and adults have shared an increased interest in "team sports," such as soccer and baseball. These recreation trends, which reflect the community's life cycle, will challenge the flexibility of Irvine's existing park system. Also, due to the increasing costs of land and inflation, new housing is developed at higher densities with less open space in private yards. This will place an additional burden on public/private open space and parks.

It is expected that the current trends in City revenues will continue to affect money available for parkland acquisition, improvements, and maintenance. It is also expected that developers will continue to request that high amenity and design features be credited towards park requirements, resulting in a reduction in actual park land.

### Identification of Issues

The following is a summary of the major park and recreation issues in the City of Irvine:

1. Given the constraints of less dedicated park land, decreased funds for improvements and maintenance, and less ability to purchase more land and improvements, how can the City provide a quality park system which offers variety and flexibility to meet residents' needs and demands?



2. Changing demographics in Irvine have, and will in the future, result in changing recreation needs and demands. How can the City regulate the park land and facilities to respond to changing citizens' needs over time?
3. The City has historically given park dedication credits for extra amenities and design features in development proposals. How can the City be selective in granting these credits, thus maximizing the amount of park land acquired through the dedication process?
4. The City has experienced increases in park land and recreation maintenance costs. How can the City continue park maintenance at current standards at the lowest possible cost to the City?

#### Response to Issues

In February 1981, the Irvine City Council established the Open Space, Parks, and Trails Committee (OSPTC) to study the important issues facing the City's park system. After a series of meetings, the OSPTC submitted a park study report with recommendations. Following the passage of SB 1785, the Committee re-examined its recommendations and expressed its desire to reserve 2 of the 5 dedicated acres for community parks and provide 3 of the 5 dedicated acres for neighborhood parks.

After examination of alternatives for park distribution, the City concurred with the OSPTC recommendation and decided that the park system outlined in the following goal, objectives, and implementation actions provides the best response to the issues.

## GOAL K

### PARKS AND RECREATION ELEMENT

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Provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in a rewarding, relaxing, and creative manner.

---

To achieve this goal, the City of Irvine has adopted the following objectives and implementing actions:



## OBJECTIVE K-1 RECREATIONAL OPPORTUNITIES

Provide a broad spectrum of recreational opportunities in park facilities for various functions, in various sizes, and in either public or private ownership.

### Implementing Actions:

- a. Provide community parks which serve residents on a planning area to Citywide level.
- b. Develop community parks with facilities appropriate for citizens of various ages and interests, such as:
  - Community centers
  - Athletic facilities
  - Large multi-use swimming pools
  - Picnic areas
  - Cultural centers
- c. Encourage the development of special areas in community parks that will enhance recreational and leisure opportunities in the City, such as the Interpretive Center in Turtle Rock Community Park and the Senior Center in Rancho San Joaquin.
- d. Provide neighborhood parks that respond to recreational needs at a local level.
- e. Provide for public and private (homeowner association) ownership and maintenance of neighborhood parks.
- f. Ensure that neighborhood parks are developed with appropriate facilities, such as tot lots, active play areas, passive open space, picnic facilities, and sports fields.
- g. Support and work with the County of Orange and the State in the development of regional and state parks.

## OBJECTIVE K-2 PARK DEDICATION

Require developers of residential land to dedicate land or fees for parks, consistent with the Quimby Act, Subdivision Map Act, Irvine Subdivision Ordinance and General Plan standards.

### Implementing Actions:

- a. Require review by the Community Services Commission and approval by the Planning Commission of all land and facilities proposed for park dedication.
- b. Establish criteria for accepting proposed park facilities, such as:
  - Adaptability of the land for park and recreation use
  - Suitability of proposed facilities to meet the recreation needs of residents the park is to serve
  - Responsible agency and costs of maintenance
  - Location of the park or facilities for convenient access to housing and schools
- c. Require that park land dedicated by developers meet minimum standards to ensure land use flexibility and the land's usefulness over time. Specific park criteria may include minimum park size, dimensions, and the types of improvements or recreation equipment which will be accepted for park credit.
- d. Prohibit park credit for subdivision design features which do not provide a recreational function, such as:
  - Planning area edges
  - Landscaped village entries
  - Expanded setbacks
  - Meandering streams
  - Paseos (greenbelts)
  - Eucalyptus windrows
  - Circulation improvements such as bicycle, hiking and equestrian trails
- e. Restrict credit for private neighborhood park facilities to those facilities typically found in public neighborhood parks. Luxury facilities such as swimming pools, spas, and tennis courts will be eligible for private park credit up to a maximum of 50 percent.
- f. Allow developers of low and moderate income housing to dedicate park land at a lower standard subject to review by the Community Services Commission and approval by the Planning Commission.

### OBJECTIVE K-3 PARK LOCATION

Locate park and recreation facilities for safe and easy access by their intended users.

#### Implementing Actions:

- a. Require proposed park locations to be reviewed prior to or at the time of tentative tract approval for easy access and relationship to surrounding uses.
- b. Locate community parks adjacent to primary or secondary arterials for easy access. Siting of community parks adjacent to freeways or major arterials may be permitted but is discouraged.
- c. Locate athletic field complexes adjacent to major arterials.
- d. Locate parks adjacent to school sites when feasible.
- e. The latest adopted Community Parks Master Plan shall be considered as a guideline for future siting of community parks.

## OBJECTIVE K-4 PARK MAINTENANCE

Ensure that Irvine's park system is developed and maintained in a manner that is cost-effective and consistent with the community's ability to pay.

### Implementing Actions:

- a. Purchase and improve park and recreation facilities consistent with the availability of capital improvement funds.
- b. Pursue state and federal funding sources to acquire park facilities in addition to those dedicated to the City.
- c. Pursue all possible methods to generate revenue for the maintenance of parks, such as maintenance districts, commercial leasing, and user fees.
- d. Require that all public neighborhood parks be maintained by the City.
- e. Require maintenance of all private neighborhood parks by the responsible homeowners association through a recorded agreement requiring the perpetual private ownership and maintenance of these parks.
- f. Pursue joint use agreements with the Irvine Unified School District.
- g. Initiate discussions with the University of California, Irvine (UCI) for joint-use park facilities located on the UCI campus.
- h. Adopt guidelines to permit the leasing of public park land for use by private enterprise for commercial recreational purposes.



## Standards

### Park Classifications

Community Parks - shall serve a minimum population of 10,000 and shall be generally twenty (20) acres in size, excluding greenbelts and school grounds.

Public Neighborhood Parks - shall serve a minimum population of 2,500 and shall be a minimum of three (3) acres in size, excluding greenbelts and school grounds.

Private Neighborhood Parks - shall serve the immediate development or specific planned community in which located and shall be a minimum of .3 acre in size.

### Park Dedication

The developer of residential subdivisions shall dedicate park land, or fees in-lieu, at the rate of five (5) acres per 1,000 population, apportioned as follows:

- 2 acres - community parks
- 3 acres - neighborhood parks
  - (1 acre - public)
  - (1 acre - private)
  - (1 acre to be public or private at the discretion of the Planning Commission upon recommendation by the Community Services Commission)

In the case that a proposed subdivision contains a population of less than 3,000 the distribution of neighborhood parks shall be left to the discretion of the Planning Commission upon the recommendation of the Community Services Commission.

### Park Dedication Reductions

The developer of new units affordable to households of low and moderate income may be allowed to reduce the dedication standard to 3.5 acres per 1,000 population to be distributed as follows:

- 1.5 acres - community parks
- 2.0 acres - neighborhood parks

Requests for this reduction are subject to review by the Community Services Commission and approval by the Planning Commission.

## Related Objective Numbers

Urban Design Element - B-2

Housing Element - C-3, C-5

Circulation Element - D-4, D-7

Public Facilities Element - G-1

Conservation and Open Space Element - L-1, L-2, L-4

Cultural Resources Element - N-1, N-2

## Compliance Regulations

Quimby Act - Section 66477 of the State of Calif. Government Code  
California Subdivision Map Act  
City of Irvine Local Park Code  
City of Irvine Subdivision Ordinance













### III-L

## **CONSERVATION AND OPEN SPACE ELEMENT**

The Conservation and Open Space Element provides a long-term guide and program for the preservation of significant large scale areas. The Conservation and Open Space Element is the integration of two required components of general plans into one [California Government Code Sections 65302(d), 65302(e), and 65301 and 65302].

### CONCEPTUAL OVERVIEW

The Conservation and Open Space Element describes the City's unique and complex environment. The environment is composed of interrelated systems, and the interactions between these systems influence the quality of life within the City. In the broad sense the environmental systems are biological processes, geophysical forces, and societal forces. The interaction between these systems produce various natural and man-made conditions such as: scenic vistas and ridgelines, wildlife and vegetation, productive soils and agriculture, or earthquakes and landslides, fires and floods, and vehicular noise and aircraft crash hazard zones.

This Element identifies (based on federal and state laws, along with City policy documents and ordinances) various natural and man-made conditions (hazards or resources) which occur within the City (see Figure L-1). Each of these criteria is graphically depicted and delineated (see Appendix 11). Additionally, the Element contains an implementation action program (phased dedication and compensating development opportunities program) which integrates the Land Use and Conservation and Open Space Elements together through the development entitlement process. The central feature of the program is to provide permanent protection of significant, large scale conservation and open space areas by public ownership.

The Conservation and Open Space Element is organized into three sections: 1) Supporting Text; 2) Objectives and Implementing Actions; and 3) Conservation and Open Space Element Map.

### SUPPORTING TEXT

#### Description of Conservation and Open Space

The Conservation and Open Space Element provides direction toward the management and preservation of the City's environment. The value of conservation and open space areas is threefold. First, conservation and open space areas provide a land use framework which establishes a balance with the built/urban structure of the City and in so doing creates visual relief, diversity and pattern. Second, conservation and open space areas recognize natural and man-made hazards which might potentially affect man if development were to occur. Finally conservation and open space areas represent the wise use, management and preservation of natural and man-made resources in order to assure their continued availability and viability.

Because of the diverse array of interactions between the City's natural and built environment, the Conservation and Open Space Element is coordinated with, and directly related to, other General Plan Elements such as Land Use, Circulation, Urban Design, Seismic, Noise, and Safety Elements.



FIGURE L-1

IDENTIFIED HAZARDS AND RESOURCES

A. Biotic Resources Criteria

Resources	Identified by Federal/ State	Identified by City	Conservation and Open Space Value	Representative Examples of Location(s) in City
1. Buffers		X	Ecological	Setback areas around ecologically sensitive areas
2. Communities		X	Ecological	Freshwater Marsh - San Joaquin
3. Habitats	X	X	Ecological	Riparian Habitat - San Diego Creek
4. Plants	X	X	Ecological	Orange County Turkish rugging - Sand Canyon Reservoir
5. Wildlife	X	X	Ecological	California Black rail - Upper Newport Bay - San Joaquin Fresh- water Marsh

FIGURE L-1

IDENTIFIED HAZARDS AND RESOURCES

## B. Geophysical Hazards and Resources Criteria

<b>Hazards</b>	<b>Identified By Federal/ State</b>	<b>Identified by City</b>	<b>Conservation and Open Space Value</b>	<b>Representative Examples of Location(s) in City</b>
1. Dam Inundation	X	X	Safety	Rattlesnake Reservoir
2. Floodways	X	X	Safety	Peters Canyon Wash
3. High Fire Risk Areas	X	X	Safety	Santiago Foothills
4. Seismic Areas	X	X	Safety	San Joaquin Hills
5. Steep Slopes		X	Safety	San Joaquin Hills
6. Unstable Soils	X	X	Safety	Santiago Foothills
<b>Resources</b>				
1. Airshed	X	X	Ecological	Agriculture Areas
2. Canyons		X	Ecological	Bommer Canyon
3. Drainage Courses	X	X	Ecological	San Diego Creek
4. Minerals	X	X	Economic	Sand and Gravel
5. Ridgelines	X	X	Aesthetic	San Joaquin Hills
6. Water Bodies		X	Aesthetic	Woodbridge Lakes
7. Water Recharge Areas	X	X	Health	Irvine Ranch - Bryan
8. Watershed	X	X	Health	Santiago Foothills

FIGURE L-1

IDENTIFIED HAZARDS AND RESOURCES

## C. Societal Hazards and Resources Criteria

	Hazards	Identified by Federal/ State	Identified by City	Conservation and Open Space Value	Representative Examples of Location(s) in City
1.	Aircraft Crash Hazard Zones	X	X	Safety	MCAS El Toro
2.	Landfill Areas	X	X	Health	Coyote Canyon
3.	Noise Impact Areas	X	X	Safety	MCAS El Toro
4.	Utility Corridors	X	X	Safety	Edison Electrical Transmission Lines
<b>Resources</b>					
1.	Agricultural	X	X	Cultural/ Ecological/ Aesthetic	Areas adjacent to MCAS El Toro
2.	Archaeological	X	X	Scientific	Santiago Foothills
3.	Historical	X	X	Cultural	Swamp of the Frogs
4.	Open Space Spines		X	Recreational	Jeffrey Spine
5.	Paleontological	X	X	Scientific	Santiago Foothills
6.	Parks	X	X	Recreational	Mason Regional Park
7.	Rangelands	X	X	Cultural/ Ecological/ Aesthetic	San Joaquin Hills
8.	Nature Center		X	Scientific	Bommer Canyon

## Existing Conditions

The City of Irvine (including its sphere of influence) lies within the coastal and foothill region of central Orange County. The major physiographic (land form), as well as, functional features are: 1) Santiago Hills; 2) Northern Flatlands; 3) Central Flatlands; and 4) San Joaquin Hills (see Figure L-2).

The geologic history of the area is characterized by periods of uplift followed by submergence with associated folding and faulting. The Santiago Hills were formed by sediments deposited in a marine environment millions of years ago. The Northern Flatlands and Central Flatlands are a portion of the Tustin Plain which was formed by eroded materials from the surrounding hills. The San Joaquin Hills consist primarily of marine sedimentary deposits.

Within the four physiographic features are eight biotic communities. Biotic communities are assemblages of plant and animal species that are found in specific physical habitats. The biotic communities are: 1) Freshwater Marsh; 2) Riparian; 3) Oak Woodland; 4) Coastal Sage Scrub; 5) Chaparral; 6) Introduced Grassland; 7) Rural-Agricultural; and 8) Urban (see Appendix for complete description of biotic communities).

The social fabric of the Irvine area is derived from its historical and prehistorical past. In 1769, the base of the Santiago Hills was first traversed by the Spanish explorer Don Gaspar de Portola. In the 1830's Don Jose Andres Sepulveda began ranching operations. In 1876 James Irvine consolidated open range land stretching from the Santiago Hills to the Pacific Ocean into the Irvine Ranch. In 1971, the City incorporated, which coincided with the start of urban development of a large portion of the Irvine Ranch.

Archaeological investigations of the area have shown that native Americans arrived in California about 30,000 years ago, and within this area about 9,000 years ago. The area's diverse natural resources supported a large population of these native hunters and gatherers.

Paleontological investigations of the area have shown that the area (primarily Santiago Hills and San Joaquin Hills) is rich in scientifically important resources. In general the area contains numerous fossil deposits formed in a marine environment.

The major characteristics of the four physiographic areas and their associated biotic and societal systems are briefly discussed below.

Santiago Hills: The Santiago Hills are a topographical extension of the Santa Ana Mountains and form the City's northern sphere of influence boundary. The Santiago Hills form a prominent ridgeline (Lomas Ridge) generally running in a northwest to southeast fashion. Topographically the area consists of rolling to undulating terrain which contains a series of moderately steep to steep unbuildable slopes, canyons, plateaus, and narrow ridges which obtain an elevation of 1,700 feet. A series of eroded sandstone gorges known as the "Sinks" are the most significant physical feature and are located in the southeast corner of the Santiago Hills. Other important features are the canyons which include; Aqua Chinon, Bee, Hicks, Little Joaquin, Rattlesnake, and Round.

The Santiago Hills, with the exception of several unimproved dirt roads and limited agricultural activities, have retained most of their natural biotic character. A mosaic of native and naturalized habitats are present, including: 1) Freshwater Marsh; 2) Riparian; 3) Coastal Sage Scrub; 4) Chaparral; 5) Oak Woodland; 6) Introduced Grassland; and 7) Agricultural-Rural. As these various habitats intermingle, they create an "edge



effect" which support diverse and abundant populations of mammals, birds, reptiles, and amphibians. In addition, the Santiago Hills provides an important link to the interior habitat areas of the Santa Ana Mountains and Cleveland National Forest.

Presently man's effect on the geophysical and biotic systems of the Santiago Hills has been minimal. However, the Bee Canyon Landfill (Class II Facility) operation will be a major impact to the geophysical and biotic systems of this area. Other important societal features of this area include: 1) Extensive archeological, historical, and paleontological resources; and 2) Agricultural (orchards) and grazing lands.

Northern Flatlands: The Northern Flatlands are a portion of the Tustin Plain, which is a large alluvial basin formed by the accumulation of eroded rock and soil materials. The northern edge of the flatlands intermingles with the rolling terrain of the Santiago Hills, while the southern edge is formed by the Santa Ana Freeway (I-5). Topographically, the area is nearly flat and generally slopes from the northeast to the southeast at an average gradient of one percent. The primary geophysical features within the area are the intermittent stream channels which are a part of the San Diego Creek watershed that originates in the Santiago Hills. The intermittent streams are Agua Chino Wash, Bee Canyon Wash, Borrego Canyon Wash, Hicks Canyon Wash, and Peters Canyon Wash.

Generally, surface soils within the Northern Flatlands consist of fine grained mixtures of sands, silts, and clay, and are classified as "prime" Class I and II agricultural soils by the U.S. Soils Conservation Service (1976).

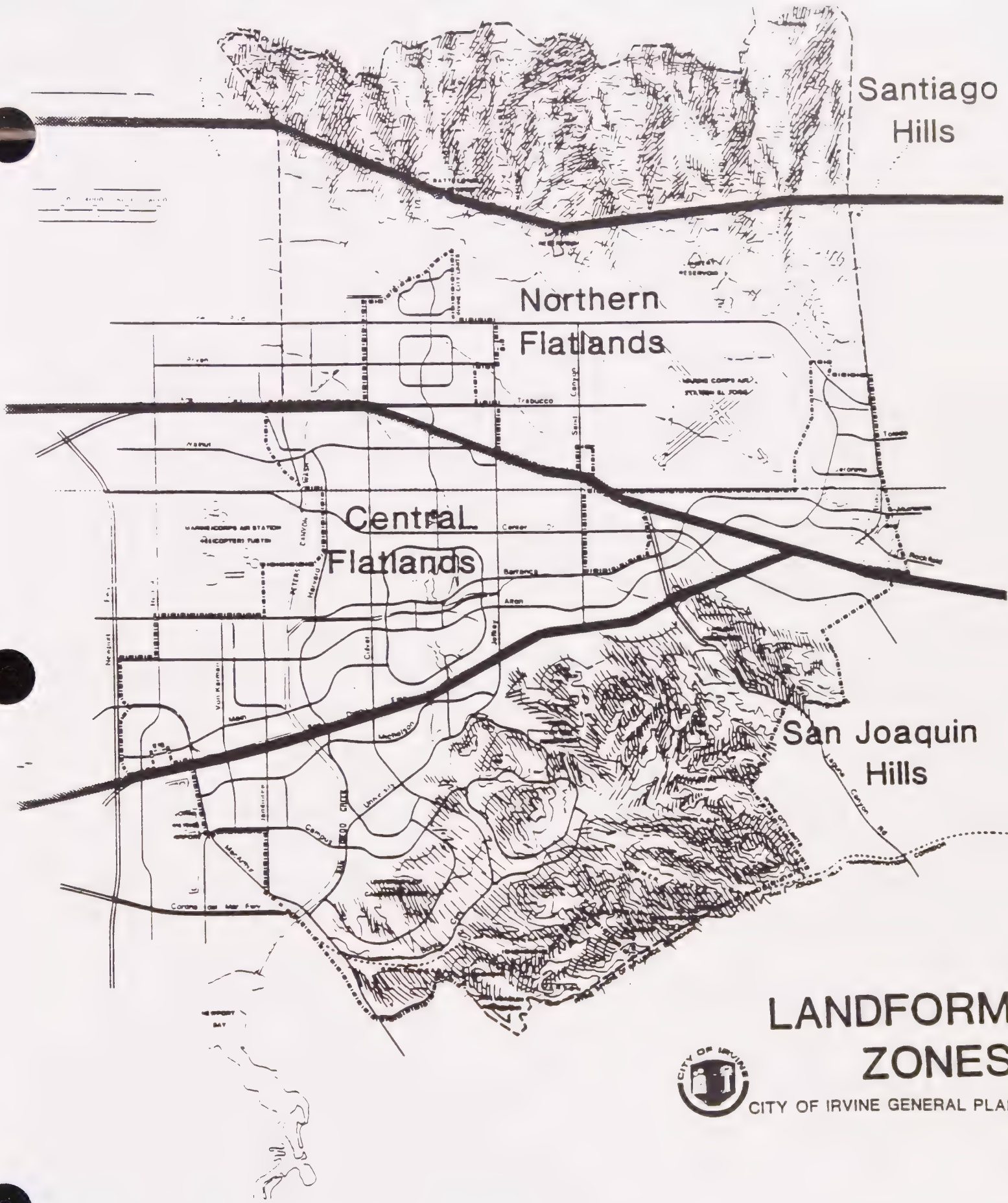
The Northern Flatlands natural biotic communities have for the most part been altered by agricultural activities and urban development. As a consequence, this area's biotic communities are for the most part environmentally simple and are artificially managed. The biotic communities are: 1) Agricultural-Rural; and 2) Urban. The primary features of these two biotic communities include: 1) Orchards and row-crops; 2) Eucalyptus windrows; 3) Irrigation ditches; and 4) Non-native ornamental vegetation.

The notable societal features of this area includes: 1) MCAS-El Toro; 2) the residential Village of Northwood; 3) Agricultural lands (orchards, row-crops, and eucalyptus windrows); 4) Historical resources; and 5) Rattlesnake, Siphon, and Lambert reservoirs.

Central Flatlands: The Central Flatlands are also a portion of the Tustin Plain. The northern boundary of the Central Flatlands is formed by the Santa Ana Freeway (I-5), while the southern edge is bounded by the San Diego Freeway (I-405). Topographically the area is extremely flat. The primary geophysical features are: 1) San Diego Creek and Peters Canyon Wash; 2) Primary liquefaction seismic zone (SRA 1); and 3) "Prime" Class I and II soils.

The Central Flatlands natural biotic communities have for the most part been altered by agricultural activities and urban development. Today the primary biotic communities are: 1) Agricultural-Rural; 2) Urban; and 3) Riparian (San Diego Creek within Planning Areas 12 and 13). Overall the biotic communities are ecologically simple and manipulated, except for the riparian community in Planning Areas 12 and 13.

The Central Flatlands represent the City's core development area and as such, the greatest amount of interaction among the built and environmental systems have occurred.



Santiago Hills

Northern Flatlands

Central Flatlands

San Joaquin Hills

LANDFORM ZONES



CITY OF IRVINE GENERAL PLAN



San Joaquin Hills: The San Joaquin Hills is a separate landform that parallels the Pacific Ocean and forms the City's southern boundary. The San Joaquin Hills which generally runs in a northeast to southwest fashion form a series of prominent hilltops and ridgelines within the City. Topographically the area consists of rolling terrain with moderately steep slopes, canyons, and narrow ridges. Other significant geophysical features are: 1) spectacular rock outcrops, many of which contain eroded sandstone caves; 2) Shady Canyon fault; 3) Bommer, Coyote, Shady Canyons; and 4) Quail Hill.

Some development has occurred within the San Joaquin Hills area which has affected its natural biotic character. As a consequence, some native habitats have been modified or only remain undisturbed in the steeper hills or canyon bottoms.

The area's ecological fabric contains all eight biotic communities. The various natural biotic communities create a mosaic of habitats which support a diverse population of mammals, birds, reptiles, and amphibians. Unique concentrations of animals occur in the San Joaquin Marsh (remnant of an extensive wetlands that once covered upper Newport Bay and San Diego Creek delta area) and Sand Canyon Wash (seasonal-migratory bird habitat - Canada geese). In addition, the San Joaquin Hills provide an important link to larger regional habitat areas such as: Laguna Canyon, Laurel Canyon, Crystal Cove State Park, and The Irvine Coastal Dedication Area.

Presently key societal features are: 1) Coyote Canyon landfill; 2) University of California at Irvine; 3) Archaeological, historical, and paleontological resources; 4) Agricultural row crops (Planning Areas 17 and 34); and 5) Residential and industrial development.

#### Conservation and Open Space Element Characteristics

The Element's land use fabric is integrated into the Land Use Element and the City's development pattern through the following concepts:

- 1) Develop conservation and open space areas so that they form large contiguous areas and may be integrated into local and regional conservation and open space areas.
- 2) Link conservation and open space areas together through a continuous linear system (open space spines) such as major drainage channels, public utility easements (gas, electric, and railroad right-of-ways), and other linear features (i.e., eucalyptus windrows).
- 3) Develop conservation and open space areas which result in the preservation of natural and man-made resources.
- 4) Develop conservation and open space areas that will minimize the impacts from natural and man-made hazards on development patterns.
- 5) Assure the permanent preservation of conservation and open space areas through a phased dedication and compensating development opportunities program which transfers development opportunities from conservation and open space areas and consolidates development in appropriate areas.

The Conservation and Open Space Element reflects these concepts as follows:

- 1) The overall concept of the open space spine network is to establish a trail linkage between development and conservation and open space areas. The network also forms a basis for other General Plan components such as circulation, public trans-

portation, trails and public facilities. Land uses for the network also include agricultural areas of orchards and field crops, regional and local biking, equestrian and hiking trails, natural drainage systems, and public utility easements.

The open space spine network is comprised of two north/south spines (Peters Canyon Wash and Jeffrey Road) and six east/west spines (Hicks Canyon Wash, Northwood railroad right-of-way, Edison easement, San Diego Creek, Edison/I-405 easement, and University Drive/Mason Regional Park). Generally, the north/south open space spines link together larger conservation and open space areas in the Santiago Hills to conservation and open space areas in the San Joaquin Hills. For example:

- a) Peters Canyon Wash. The Peters Canyon Wash open space spine parallels the City's western boundary and connects Irvine Lake and Lower Peters Canyon Wash Regional Park in the Santiago Hills with the San Joaquin Marsh and Upper Newport Bay in the San Joaquin Hills.
- b) Jeffrey Road. The Jeffrey Road open space spine runs through the center of the City and connects the future Limestone Regional Park and Lomas Ridge in the Santiago Hills with the Sand, Bommer, and Shady Canyon areas, Crystal Cove State Park, and Irvine Coastal Dedication area in the San Joaquin Hills.

Overall, the east/west open space spines integrate the City's urban fabric with conservation and open space areas by providing access to the north/south open space spines.

- 2) In general three conservation and open space areas have been identified (as part of phased dedication and compensating development opportunities program). that form large contiguous blocks of land which may be integrated into local and regional conservation and open space areas.

The areas are:

- a) Santiago Hills. Located in the City's northern sphere of influence, the Santiago Hills encompass a portion of the County of Orange's proposed Limestone Regional Park. Additionally, the proposed regional park is adjacent to the Cleveland National Forest.
  - c) San Joaquin Marsh. Located in the southern portion of the City, the San Joaquin Marsh is adjacent to the State's Upper Newport Bay Ecological Reserve.
  - d) San Joaquin Hills. Located within the San Joaquin Hills, the Bommer and Shady Canyon areas are adjacent to Crystal Cove State Park and the Irvine Coastal Dedication Area. The Sand Canyon and Quail Hill areas form a center-city open space area that connects to the Bommer and Shady Canyon areas.
- 3) The preservation of natural and man-made resources occurs throughout the City. As examples, areas such as the San Diego Creek riparian community and the San Joaquin Marsh wetlands have been designated for preservation because of their valuable biotic resources, while an area such as the Lomas Ridge has been designated for preservation because of its unique geological formations (sinks) and geologic hazards (steep slopes and landslides), as well as for its cultural resources.
  - 4) Natural and man-made hazards such as aircraft crash zones, noise impact areas, drainage channels, steep slopes, and hazardous fire areas affect large areas of the



City. As such, areas that are severely impacted by these hazards, especially aircraft crash zones, noise impact areas and steep slopes, have been designated for conservation and open space purposes in order to provide for public safety. Examples of such areas are the agricultural lands around El Toro Marine Base, Peters Canyon Wash (drainage) and the Lomas Ridge (steep slopes).

- 5) Located in the northern and central flatlands of the City and its northern sphere of influence, the lands designated as Agriculture form a large center-city open space area, due to the juxtaposition of aircraft noise, aircraft crash hazard zones and prime soils.

### Trends

Examination of Orange County's land use and population growth patterns from 1950 to present indicates an increase in urban land uses and a corresponding decrease in conservation and open space areas. The early stages of urbanization focused on flat land areas such as agricultural lands, flood plains, and wetlands while later stages of development have focused on more rugged terrain such as hillsides. During this time the regional (County and cities) land use policies resulted in the conversion of approximately 100 acres of conservation and open space areas to urban land uses per every 1,000 people added to Orange County's population.

As an example, in 1950 the County's land area encompassed 783 square miles and had a population of 216,224. At that time the County's land area and population were distributed between 13 incorporated cities and county unincorporated territory. The 13 cities had a combined land area of 64.9 square miles and a population of 124,647, while County unincorporated territory was 721.1 square miles and had a population of 91,577.

By 1986, the County contained 26 cities which encompassed 382.1 square miles and had a combined population of 1,836,257. Correspondingly, the County's unincorporated territory was 403.9 square miles and had a population of 309,499.

Reflecting regional land use and population growth patterns, the City of Irvine was incorporated in 1971. At that time the City's land area encompassed 28.3 square miles and its population was 20,156. By 1988, the City's incorporated boundary encompassed 43 square miles and contained a population of 97,873.

Initially the effects on the environmental systems (biotic processes, geophysical forces, and societal forces) due to the conversion of undeveloped land to urban land uses were incremental and localized, at both the County and the City level, since there were tens-of-thousands of acres of undeveloped land. As such, management and preservation of these areas was not perceived as being urgent. However, as development continued the cumulative effects of urbanization on the environmental systems resulted in many instances of simplification, loss of diversity, and disruption of linkages between the environmental systems. Essentially the remaining undeveloped lands were residual lands after development, rather than areas intended to sustain functional environmental systems.

The result of this conversion of undeveloped land to urban land uses was an increase of public awareness of shrinking resources, while the available supply of environmentally functional undeveloped land was decreasing. Consequently, the need to properly manage and preserve undeveloped land as designated conservation and open space areas, and increase conservation and open space planning became a high public priority.

## Identification of Issues

As development of the City continues, conservation and open space areas are subject to urbanization which results in the simplification and disruption of the environmental systems. The coordinated efforts of all levels of public and private sectors are necessary to ensure the management and preservation of the appropriate conservation and open areas. The major issues are:

- 1) Balancing conservation and open space objectives with development objectives.
- 2) Locating and integrating conservation and open space areas into urban development.
- 3) Providing public access and enjoyment of conservation and open space areas.
- 4) Maintaining and preserving the environmental systems.
- 5) Identifying significant hazards and resource areas and managing those areas so as to protect the public's safety, health and welfare.
- 6) Establishing an effective and realistic implementation program to provide for the permanent preservation and management of conservation and open space areas.

## Response to Issues

This section describes the following : 1) The General Plan framework for the City's Conservation and Open Space Program; 2) the mechanism for the Implementation Action Program; and 3) specific land use objectives and actions to manage and preserve conservation and open space areas. Together with Objective L-1, these components establish the framework for the Conservation and Open Space Element Action program (i.e., phased dedication and compensating development opportunities program), as required by California Government Code Section 65564.

### 1) General Plan Framework:

In response to the previously identified issues, the City Council established a "Conservation and Open Space Element Task Force" to review significant conservation and open space hazards and resource areas in October 1985. The Task Force explored various alternative means of assuring the long-term protection of significant conservation and open space areas identified through the review process.

As a result of this comprehensive review, the City Council prepared an initiative measure (Initiative No. 88-01, March 1988) for a vote of the Citywide electorate. The initiative was approved on June 7, 1988 (see Appendix C for the Initiative). The pertinent provisions of the initiative measure are summarized as follows:

- a) The initiative facilitates by means of a program of development opportunities transfers, the consolidation of important conservation and open space areas into large contiguous areas that may be integrated into local and regional open space areas.
- b) The initiative facilitates by means of a program of development opportunities transfers, the development of a network of open space spines linking the consolidated conservation and open space areas.



- c) The initiative directs City Council to amend the General Plan to reflect specified changes to the Conservation and Open Space Element and Land Use Element maps and text and any further amendments to the General Plan required to carry out measures approved by the initiative.
- d) The initiative establishes the concept of a phased dedication and compensating development opportunities program in order to preserve significant conservation and open space areas in exchange for intensification of certain other areas.

## 2. Implementation Program:

The Implementation Action Program integrates the Land Use and Conservation and Open Space Elements together, in that it establishes a phased dedication and compensating development opportunities program which links the dedication of certain conservation and open space areas to the development entitlement process as depicted in Figures L-3 and L-4. The purpose of the program is to provide for the permanent protection of large, contiguous conservation and open space areas through large-scale planning rather than utilizing the current preservation approach of project-by-project dedication. Historically, the project-by-project preservation approach resulted in small and fragmented conservation and open space areas which were difficult to integrate into the local and regional conservation and open space land use plans in contrast to the large scale conservation and open space areas to be protected by the phased dedication and compensating development opportunities program.

The direct benefit of the program is the permanent protection and preservation of visually significant ridgelines and hillsides, significant biotic communities (e.g., Riparian, Marsh, and Oak Woodland), recreational lands, archeological and paleontological resources and areas subjected to geophysical and societal hazards. The permanent protection of these areas assists in minimizing and mitigating development impacts such as habitat destruction, landform alteration, and visual and safety impacts. Additionally, the program permits the integration of conservation and open space areas into the local and regional conservation and open space land use plans such as proposed Limestone Regional Park and proposed Irvine Coast Wilderness Regional Park.

The primary planning concept utilized in the large-scale planning effort to develop a conservation and open space implementation program was phased dedication combined with compensating development opportunity transfers (i.e. Government Code Section 65564). This concept facilitates the aggregation of large, contiguous conservation and open space areas by moving development potential from sensitive areas to areas that can accommodate development because of suitable topography, adequate infrastructure and circulation networks, and proximity to employment and residential centers.

The primary unit of the phased dedication and compensating development opportunities program is a series of statistical areas or districts (see Figure L-3). Each district has been assigned a conservation and open space value, and a corresponding development value (i.e., conservation and open space acreage, residential acreage and dwelling units, commercial acreage and square footage, and industrial acreage and square footage - see Figure L-4).

The Conservation and Open Space Element land use designations of Preservation Areas and some Recreation Areas (primarily open space spines exclusive of utility

and flood control right-of-way requirements) constitute the majority of land to be dedicated through the phased dedication and compensating development opportunities program. Recreation Areas comprising community-level parks, community-level park dedication will be dedicated separately and according to the City's Local Park Code.

Other Conservation and Open Space Element land use designations, such as Landfill Overlay and Water, are not involved in the program since the land is already controlled by public and/or private agencies or utilities. As such, these areas are already set aside for conservation and open space purposes.

Additionally, within the City's northern sphere of influence the land designated Agriculture (i.e. Planning Areas 5,6, 8 and 9) is not included in the phased dedication and compensating development opportunities program. Resolution of any phased dedication and compensating development opportunities program involving this area will occur at the time of annexation.

### 3. Conservation and Open Space Land Use Definitions and Policy Objectives:

In response to the previously identified issues, land uses and definitions for the Conservation and Open Space Element have been developed and integrated into the Land Use Element in order to provide the necessary direction towards the management and preservation of the environmental systems.

The Conservative and Open Space Element land use category and corresponding diagram (Figure L-5) contains six subcategories consistent with the Conservation and Open Space category in the Land Use Element. The six land use subcategories, corresponding definitions and appropriate uses are described below and are graphically depicted on Figure L-5.

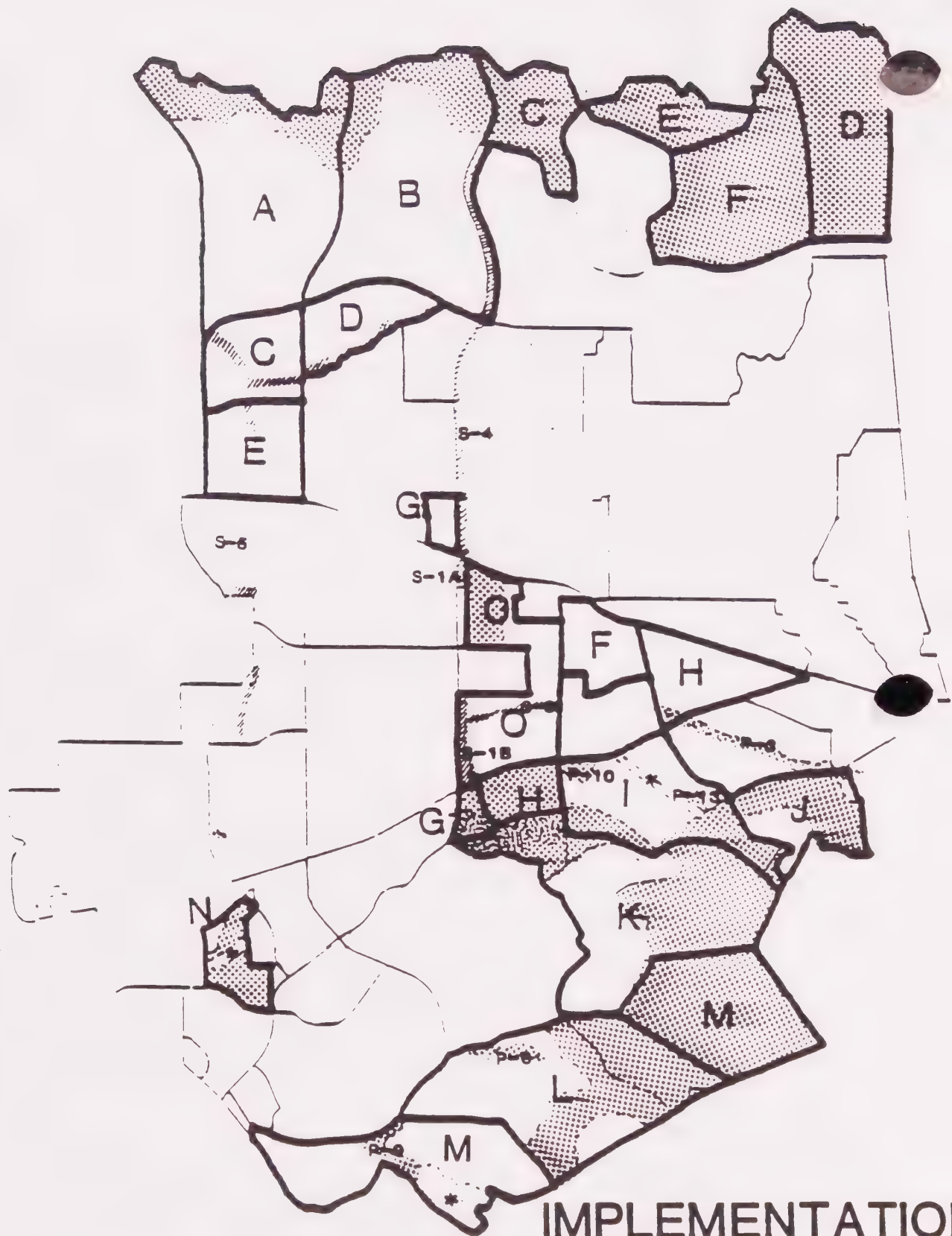
#### a) **Preservation Areas**

The Preservation Areas land use subcategory provides for the protection and maintenance of natural resources. This subcategory identifies and constitutes the majority of lands to be transferred to public ownership through the phased dedication program which is an integral part of the open space implementation program (see Objective L-1).

Preservation Areas are lands that contain visually significant ridgelines, biotic communities of high significance, geologic constraints and cultural resources. These lands have been judged desirable for permanent preservation in a natural state with little or no modification and have been amassed into large scale contiguous areas, which overall, have been judged to be more protective of natural resources than could be achieved on an incremental basis with individual development projects.

Passive public recreation (such as tent camping, hiking, biking, and equestrian trails), botanical gardens, cattle grazing, scientific research and other public uses compatible with the natural amenities of these lands; transportation corridors, arterial highways, utilities, transition zones, fuel modification zones, habitat enhancement, drainage and flood control facilities, and other infrastructure designed so as to minimize any adverse environmental impacts





\* NOTE: Areas with asterisk or number are not a part of implementation district. Please refer to legend and notes on following page.



IMPLEMENTATION DISTRICTS

CITY OF IRVINE GE...

# IMPLEMENTATION DISTRICTS LEGEND

## District Boundary

District Boundaries have been drawn to certain development areas and preservation areas, which will be implemented together. Within each lettered district, preservation areas will be conveyed to the city or a public agency after building permits are issued in development areas in accordance with the provisions of the implementation action program.

## Preservation Area

Preservation Areas are lands to be dedicated to the City or other public agency for permanent open space purposes. Numbered preservation area (e.g., "P-10") are not a part of Implementation Districts and will be offered for dedication separate from unnumbered preservation areas.

## Development Area

Development areas are designated for residential, commercial, and/or industrial land uses in the Irvine General Plan and for specific intensities as shown in Figure L-4.

## Spine

Open space spines are not a part of Implementation Districts and will be offered for dedication separate from Preservation Areas in conjunction with the development of adjoining land. Spines have been numbered for general reference.



Note: Areas shown with an asterisk are not a part of the Implementation District.

FIGURE L-4

IMPLEMENTATION ACTION PROGRAM

## DEVELOPMENT INTENSITY AND DEDICATION AREA BY DISTRICT

<u>DISTRICT</u>	(4) <u>DWELLING</u> <u>UNITS</u>	(4) <u>COMMERCIAL</u> <u>SF</u>	(4) <u>INDUSTRIAL</u> <u>SF</u>	(4) <u>DEVELOPMENT</u> <u>ACRES</u>	<u>PRESERVATION</u> <u>AREA ACRES</u> (1)(4)
A	4,627	23,769	0	1,532	530
B	3,286	0	0	1,441	487
C	3,900	255,077	0	410	532
D	2,885	23,769	0	551	961
E	4,745	72,680	0	615	350
F	0	0	4,700,000	361	1,266
G	0	500,000	0	68	27
H	0	1,800,000	0	NA	298
(3) I	2,030	300,000	910,000	588	589
(3) J	750	0	0	205	445
(3) K	2,360	0	0	888	837
(3) L	3,460	0	0	907	1,054
(2) M	2,000	600,000	0	588	1,088
N	1,000	0	0	25	192
O	4,050	1,575,000	2,372,931	552	176

1. All acres are estimates of gross acres and are subject to refinement. Acreages will be refined and allocated to specific land use categories in subsequent planning processes. Preservation Areas on this exhibit do not include Spines and Minor Preservation Areas as described in Objective L-1 (b).
2. These figures may be adjusted according to the provisions of Objective A-4 (d).
3. The distribution of dwelling units among these planning areas may be adjusted according to provisions of Objective L-1 (h).
4. Data adjustment will be accounted for in the Development Monitoring Program.



are allowable uses. All residential, commercial, and industrial uses are strictly prohibited (Preservation Areas in Planning Area 12 are exempted from this commercial prohibition). Passive recreation activities such as riding, hiking, picnicking and camping may be operated as a regional park concession by a limited commercial venture under contract to the City. In addition, consistent with the City's zoning ordinance, agricultural uses are permitted uses prior to transfer through the phased dedication program.

Areas designated for preservation shall be primarily for their biotic and cultural resources and open space values, with recreation uses such as community parks not allowed. Biking, equestrian and hiking shall be subordinate and secondary uses within the preservation areas, and where deemed appropriate constantly monitored for their impact and compatibility.

b) Recreation Areas

The Recreation Areas land use subcategory provides for community level recreational opportunities and activities including open space spines. This subcategory identifies lands suitable for active recreational opportunities and activities for public use and enjoyment. Additionally, this subcategory contains some lands to be transferred to public ownership through the phased dedication and compensating development opportunities program which is an integral part of the open space implementation program (see Objective L-8, Recreation Areas). Guidance about park development and standards is provided in the Parks and Recreation Element (Chapter K) and the City's Subdivision Ordinance.

Recreation Areas are distinguished from Preservation Areas by more intense recreational uses and by their manicured appearance and improved facilities. Additionally, Recreation Areas do not necessarily require maintenance of natural resources.

Recreation Areas will not be limited to low intensity recreational activities as are Preservation Areas, but will be designed to accommodate the development of picnicking and fishing areas, nature centers, stables, golf courses, regional and community level parks, swimming pools, botanical gardens, wholesale nurseries (within limited areas), and open space spine.

c) Water Bodies

The Water Bodies land use subcategory identifies lands for the establishment of public and privately owned water sources for consumptive and recreational use.

Public and privately owned reservoirs and lakes will provide the City with sufficient water resources and opportunities to develop water-related recreation activities, (i.e., boating and fishing) and will supply water resources for agriculture and domestic use, and to irrigate passive and active recreation facilities (i.e., ball fields and picnicking).

d) Agriculture

The Agriculture land use subcategory is shown on the Land Use Element map in order to preserve prime agricultural land (Class I and II soils) while allowing an appropriate use for land impacted by aircraft crash hazard zones and noise from El Toro Marine Corps Air Station.



Proper cultivation of the area will provide agriculturally productive land without creating land use related disturbances. In addition, the land will establish large areas of open space which will provide visual contrast to the built environment, cultural linkage to the City's agrarian past, open space linkage to the Santiago Hills and San Joaquin Hills, economic benefits to the community, and enhancement of the scenic environment of the area and the surrounding communities.

e) Golf Course Overlay

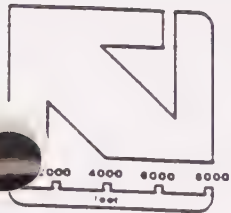
Within the Golf Course Overlay land use subcategory a golf course is a permitted use.

f) Landfill Overlay

The Landfill Overlay land use subcategory is shown on the Land Use Element map in order to provide adequate Class II solid waste sites within the specific areas underlying the Recreation Area designation (see Waste Facility Element).

The landfill shall be located in a sensitive manner so as not adversely affect surrounding land uses (residential, institutional, conservation and open space). Additionally, the land must be capable of receiving solid waste materials without risking environmental degradation.

The landfill will provide the City with an appropriate area for disposal of solid waste materials. Upon the eventual closure of the landfill, the land must be in suitable condition to support the underlying primary land use.



# CONSERVATION OPEN SPACE ELEMENT



CITY OF IRVINE GENERAL PLAN

-  Preservation
-  Recreation
-  Water Bodies
-  Agriculture
-  Golf Course Overlay
-  Landfill Overlay

GOAL L

CONSERVATION AND OPEN SPACE ELEMENT

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Maintain and preserve the environmental systems as a major feature in the City's development.

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To achieve this goal the City of Irvine has proposed the following objectives and implementing actions:



## OBJECTIVE L-1 IMPLEMENTATION ACTION PROGRAM

Establish an implementation action program that provides the opportunity to permanently protect and preserve designated conservation and open space areas as development of designated Commercial, Industrial, Institutional and Residential areas occur.

### Implementing Actions

a Phased Dedication and Compensating Development Program. The policies set forth in the Program are to be considered integral components of both the Conservation and Open Space Element and the Land Use Element of the General Plan. The Program shall integrate the Land Use and Conservation and Open Space Elements together by establishing a program which links the dedication of conservation and open space areas to the development entitlement process. The purpose of the Program is to provide permanent protection of open space by means of public ownership.

With the completion of the Program described below, all major open space preservation areas (under the ownership of The Irvine Company or its successors) that are required to assure the appropriate balance of development and open space will be secured.

Other conservation and open space areas and development areas not under the ownership of The Irvine Company or its successors will, through subsequent planning processes (i.e. General Plan Amendments, Zone Changes, Concept Plans, and subdivision applications), be required to assure the appropriate balance of development and conservation and open space areas as outlined in the Land Use and Conservation and Open Space Elements and their respective goals, objectives, and implementing actions.

b Dedication/Development Program. The portions of the City directly involved in this dedication/development program have been divided into separately lettered "Districts" containing both open space lands for ultimate conveyance to the City and corresponding development areas, as shown on Figure L-3. The open space lands and development areas of a District are, in some cases, not contiguous. The Irvine Company or its successors in interest ("TIC") shall convey the open space lands (consisting of Preservation Areas, minor preservation areas, and Spines as depicted on Figure L-3 by the letter references "P" and "S" respectively, and collectively referred to in this Implementation Actions program as "conveyance areas") within a District to the City or other appropriate public agency as reasonably approved by the City so that they may be preserved as open space in return for the completion of development on other land in the same District owned by TIC (referred to in this Implementation Actions Program as "development areas"), more particularly as shown on Figures L-3 and L-4, consistent with the following procedures. The City shall undertake such actions as are necessary to secure for TIC the right to develop development areas in the manner set forth herein, and pursuant to a mutually agreeable development schedule. Upon request by TIC, the City shall enter into development agreements, or approve vesting maps, for these purposes.

c Map Interpretation. All boundaries on Figure L-3 are conceptually delineated and are not intended to be exact. Gross acreages of conveyance areas and development areas stated in Figure L-4 are estimated and include some lands which ultimately may not be part of the Implementation Actions Program, e.g., roadways, utilities and other public facilities. Preservation Areas are assumed to include any necessary edge treatments, fuel modification areas, and manufactured slopes located at the boundary between



development and Preservation Areas ("transition zone"). The precise boundary of the conveyance areas and abutting development areas, and the precise acreage to be offered for conveyance, are to be determined by mutual agreement at subsequent stages of development.

d Two-Part Conveyance. As illustrated on Figure L-6, offers of conveyance may be made in two parts. The first part shall contain, to the greatest extent possible, substantially all of the Preservation Area and shall be offered for conveyance at the time specified in implementing action e below, but Preservation Area lands abutting potential development areas may be excluded from the first part. The boundaries of the second part shall be defined and offered for conveyance upon the recordation of final maps for development abutting the area to be dedicated. Where appropriate, the transition zone may be offered for conveyance as open space easements.

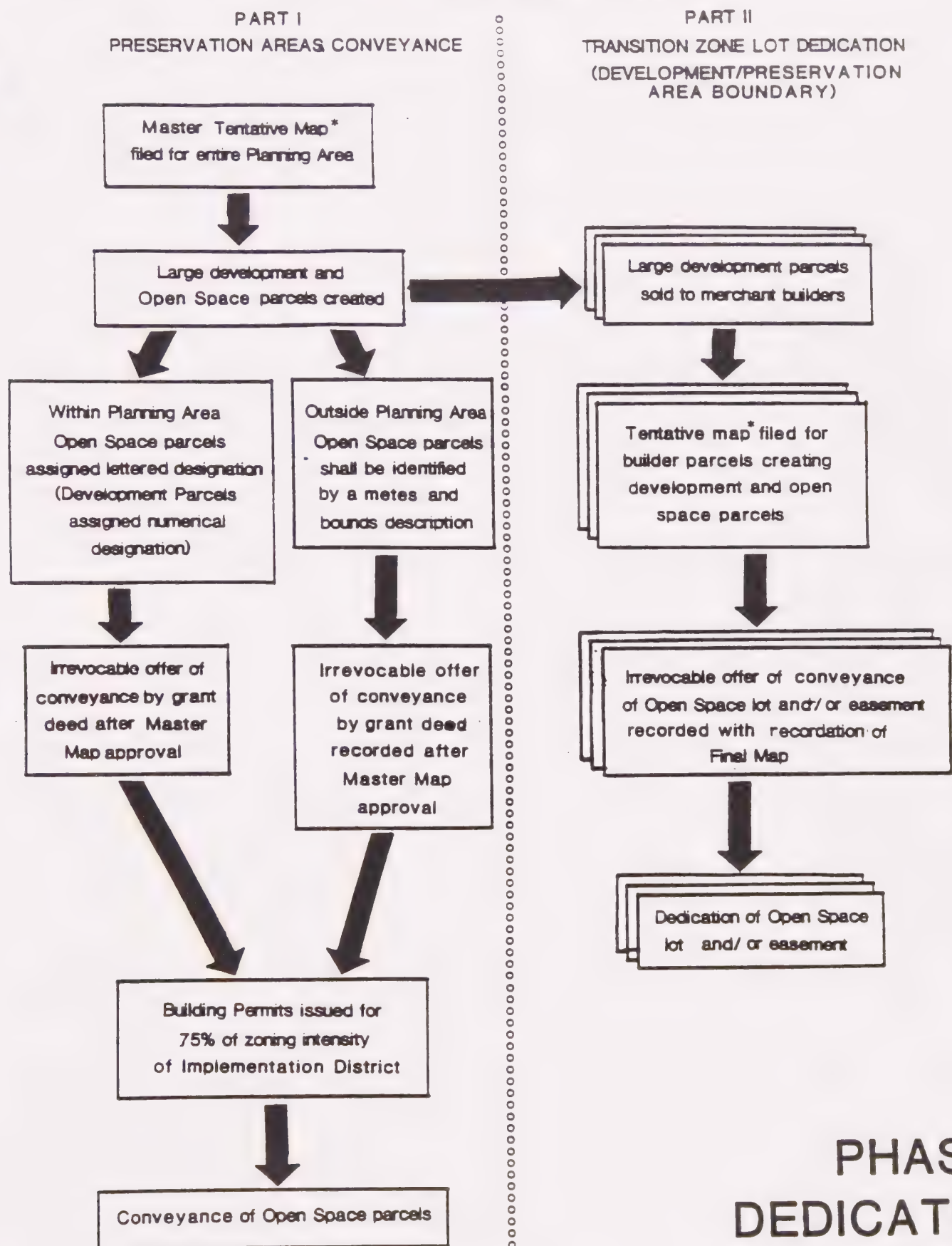
e Preservation Area Conveyance. Concurrent with the recordation of the first final tract map within a development area of each District shown on Figure L-3 (except District H), an offer of conveyance for all the conveyance areas within the District shall be recorded. Each offer will provide that it may be accepted no sooner than ninety days following issuance of building permits for 75% of the development in the District as indicated on Figure L-4 or completion of development in the District, whichever occurs first.

f Offer of Conveyance. Each offer will be subject to nonmonetary encumbrances, easements, liens, restrictions and title exceptions of record or apparent which do not prevent use of the conveyance areas consistent with the uses set forth in Objective L-8 Jeffrey Road spine, in response to issues (Section 3) [a]) in this element, and the definition of Preservation Areas set forth earlier in this element as may be applicable to the conveyance area as identified in Figure L-3, and consistent with the intent of this Program, and to the following:

1. The offer shall provide for conveyance of title by grant deed subject to land use restrictions and/or open space easements assuring that the conveyed land shall be used in perpetuity consistent with the intent of the dedication and the purposes to be served by Open Space Spines and Preservation Areas, with corresponding means of enforcement. Lands reserved for road, transportation, transit, drainage, flood control, water, sewer and utility purposes by public agencies may be excluded from the offer at TIC's discretion.

2. Mineral rights and water rights (excluding the right of surface entry) will be reserved by TIC on conveyed lands. TIC shall make full written disclosure with respect to toxic or hazardous substances which in its knowledge were stored on or deposited in the land to be dedicated. Road, transportation, transit, flood control, drainage, water, sewer, and utility easements necessary to accomplish development in adjoining areas and/or to accomplish planned facilities by public agencies and utilities will be reserved by TIC on conveyed lands. Easements will be reserved on conveyed lands if necessary to preserve or facilitate agricultural uses on adjoining Preservation Areas not yet conveyed.

## TWO PART SUBDIVISION PROCESS



## PHASED DEDICATION PROGRAM



CITY OF IRVINE GENERAL PLAN



3. The enhancement of habitat areas by The Irvine Company, particularly riparian habitat, shall be allowed in conveyed Preservation Areas consistent with applicable standards and procedures for purposes of environmental impact mitigation in development areas.

4. The City or other appropriate public agency shall accept the offer within two years after all other conditions to acceptance have been satisfied. However, acceptance may be delayed beyond two years by mutual agreement of the City and TIC.

g Transferability of Dwelling Units. Subject to paragraph d of Objective A-4, the total number of residential dwelling units in Planning Areas 17, 18, 22, 26 and 27 may not exceed 10,600. These dwelling units may be freely transferred by TIC among the aforementioned planning areas without the need for any amendment to the City's General Plan. Any transfer which increases the number of dwelling units allowed in a Planning Area by more than 15% above the amounts designated in Figure A-10 of the General Plan, or greater percentage may be subject to review as part of the subdivision process. It is the intent of this provision to allow a total of 10,600 dwelling units (except as modified in paragraph d of Objective A-4) to be constructed in these Planning Areas, to be measured cumulatively by actual permits as issued.

h Incomplete Development. The development areas shown on Figure L-3 are believed to be free of environmental constraints which would require development in such areas to be limited or which otherwise would render development infeasible. If, however, governmental or developmental standards or requirements constrain development within the development areas of a District due to extraordinary biotic, geologic or other hazard (but excluding MCAS El Toro operations), archaeologic or paleontologic constraints or limitations, the City shall transfer the development opportunities eliminated by such standards or conditions to other mutually acceptable locations.

Additionally, if governmental or developmental standards or requirements constrain development within the development areas of a District due to health or safety constraints attributable to USMCAS El Toro operations the City and The Irvine Company will seek to transfer the portion of the development opportunities reduced by such additional standards, regulations or conditions to other mutually acceptable locations. If another mutually acceptable location cannot be agreed upon, the City and the Irvine Company will meet and confer on appropriate adjustments to the Implementation Action Program.

If the total allowable development in any district is not constructed because the landowner (TIC) and or developer elects not to build to the allowable development intensity, except as provided in implementing action d of Objective A-4 the City shall not be required to transfer that balance/difference elsewhere.

i Additional Open Space Requirements. No additional open space dedication exactions may be imposed on any land owned by TIC, its successors or assignees, within the City or its Sphere of Influence (excluding unincorporated lands presently designated as agriculture in the Irvine General Plan in Planning Areas 5, 6, 8 and 9, which are not a part of this Program) except as ordinarily required on a project by project basis for compliance with provisions of the City's subdivision ordinance (for example, Quimby Act requirements, village edges and building setbacks).

However, if for reasons other than those governed by implementing action h above TIC, its successors or assignees request intensification of the land uses beyond the land use intensities set forth in Figure L-4, the City reserves the right to require additional open space dedication exactions.

j Open Space Improvements. No conditions will be attached to any land owned by TIC, its successors or assignees, requiring improvements to or maintenance of Preservation Areas conveyed under this program except for habitat enhancement as provided in implementing action f(3) above, for "transition zone" improvements as provided in implementing action b above, and for utilities and infrastructure necessary to serve The Irvine Company development.

No conditions will be attached to any land owned by The Irvine Company, its successors or assignees, requiring improvements to or maintenance of the Jeffrey Open Space Spine as defined in paragraph n below, except for utilities and infrastructure necessary to serve Company development and also the permanent trail construction in accordance with the City's 1985 "Guidelines for Bicycle Facilities in Irvine" (excluding grade separations solely used for trail systems) in the spine adjacent to the development. Improvements will be made to the Jeffrey Open Space Spine by the City which are compatible with and complementary to adjoining development. The Jeffrey Open Space Spine will serve as the Village Edge for the adjoining development areas, and no further Village Edge dedications or improvements will be required for adjoining development areas.



## OBJECTIVE L-2 BIOTIC RESOURCES

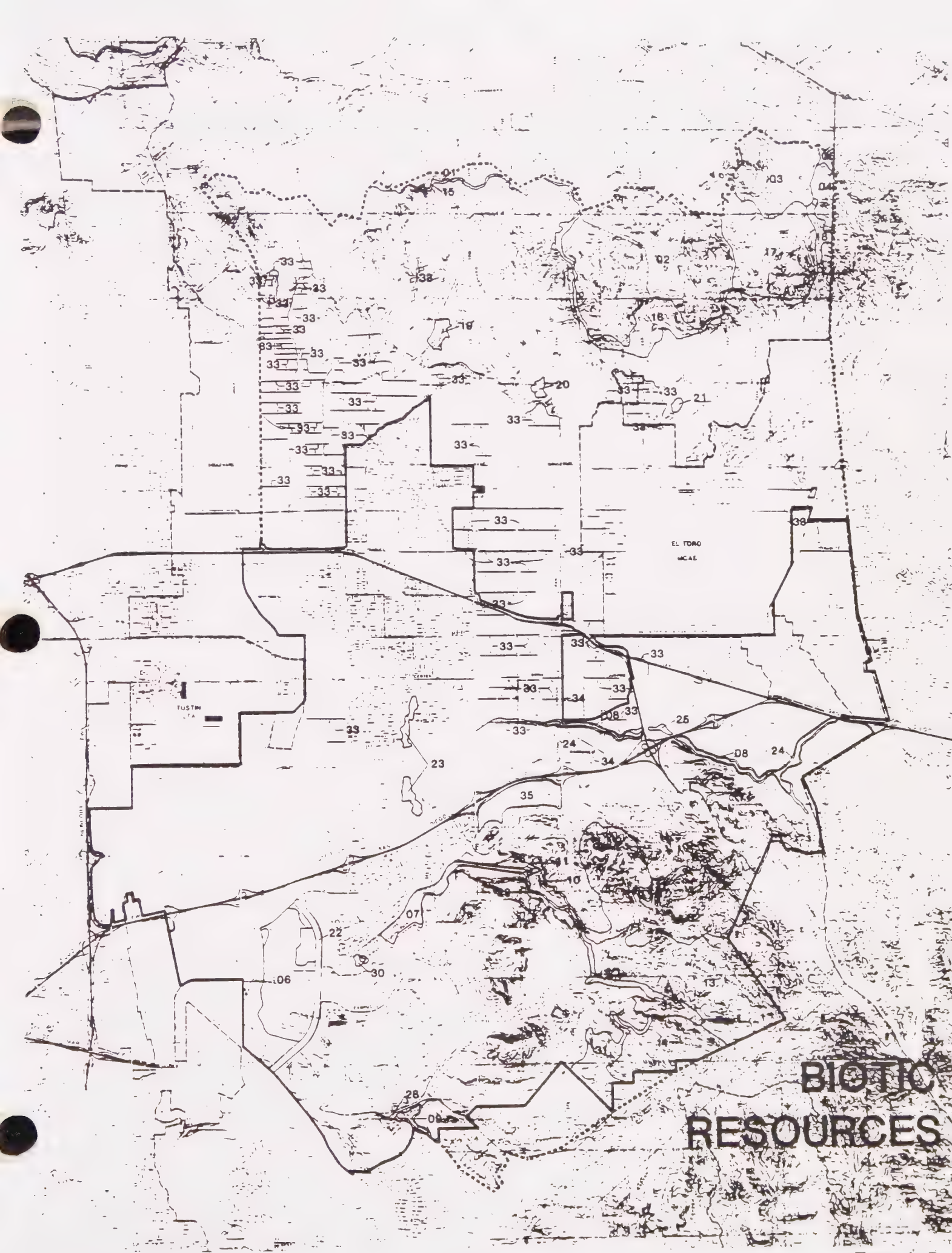
Maintain and preserve areas with significant and diverse biotic communities.

### Implementing Actions:

- a. Utilize the City's Master Environmental Assessment (MEA) biotic data base, resource map, and the City's land use impact model in the development review process as informational sources to determine the proximity and extent of biotic resources and potential level of impact.

The Conservation and Open Space Element is intended to preserve those natural resource areas in the Master Environmental Assessment (MEA) which are the most viable and significant. The protection of large, contiguous Preservation Areas containing the uses set forth in the Implementation Actions Program in Objective L-1 is deemed, on balance, to better protect biotic resources than the protection of small, isolated resources within individual development areas. The Conservation and Open Space Element, through the Implementation Actions Program will preserve the following specific MEA biotic resource areas in whole or in part and will accomplish the specific recommended MEA mitigation measures for the following resource areas depicted on the Biotic Resources Map (see Figure L-7).

1. Buffer Areas 15, 16, 17, 18, 24, 26, 29, 31 and 32.
2. Link between Habitat Areas 17 and 18.
3. Locally Significant Riparian Habitats 25.
4. Locally Significant Freshwater Marsh Habitat 22.
5. Locally Significant Stands of Native Vegetation/Other vegetation 17, 32 and 34.
6. Open Water/Shoreline with Local Values as Waterfowl Habitat 19, 20, 21, 23, and 30.
7. Rare, Endangered and Unique Species Habitat 10, 11, 12 and 27.
8. Regionally Significant Riparian Habitat 5, 7, 8, 9, 13 and 14.
9. Regionally Significant Oak Woodland/Savannah Habitat 1, 2, 3, 4, 5 and 14.
10. Regionally Significant Freshwater Marsh Habitat 7 and 9.
11. Open Water/Shoreline with Regional Significance as Waterfowl Habitat 10 and 27.
12. Prime Bird of Prey Foraging/Wintering Area 1 and 14.
13. Prime Bird of Prey Nesting/Roosting Area 1 and 14.
14. Major Wildlife Movement Corridor 1, 4, 5 and 14.
15. Woodland/Brushland and Grassland Ecotone 1, 2, 3, 4, 5 and 14.





- b. The following resource policies shall apply to development areas located within areas identified on the Biotic Resources Map of the MEA in lieu of the provisions of the Biotic Element of the MEA.
1. The preservation objectives and recommendations to protect 20% of the resource area for Buffer Areas 16, 31, and 32 on the biotic Resources Map of the MEA will be achieved satisfactorily by the dedication of Preservation Areas in accordance with the procedures in the Implementation Actions Program in Objective L-1. Development areas located within Areas 16, 31 and 32 shall not be subject to any biotic preservation, protection, requirements, measures, or mitigations set forth in the MEA for these Buffer Areas.
  2. Development as shown on the Land Use Element Plan will be allowed in Marsh Area 6 and Habitat Area 13 on the Biotic Resources Map of the MEA in recognition of the dedication of similar resources in the Preservation Areas. Development areas located within Areas 6 and 13 shall not be subject to any preservation, protection, requirements, measures, or mitigations set forth in the MEA for these areas except that riparian/wetland habitat adversely impacted by such development will be mitigated in accordance with procedures established in an open space management and conservation plan.
  3. Development as shown on the Land Use Element Plan will be allowed in Buffer Area 28 on the Biotic Resources Map of the MEA provided that any significant adverse development impacts on habitat in Riparian/Wetland Area 9 will be mitigated. The final mitigation measures shall be established in an open space management and conservation plan. Such mitigation measures shall be developed with consideration for the type and resilience of the habitat, the specific type and design of development, and the effect of natural and man-made barriers in the area.
  4. The extent to which eucalyptus windrows identified as Area 33 on the Biotic Resources Map of the MEA should be integrated into future development is to be determined by the City during subsequent project review.
- c. Utilize an "Open Space Management and Conservation Plan" (OSMCP) as the primary biotic implementation document for establishing compliance with the above (L-2,a and L-2, b) Biotic Policies, the timing and phasing of mitigation measures, and the responsibility for implementing mitigation measures. This plan shall be prepared in conjunction with a concept plan and/or zone change application and in accordance with the City's guidelines for open space management and conservative plan reports. In addition, the plan will address "Transition Zones" as described below.
1. At the boundary between development and Preservation Areas, transition zones of variable width will be defined in the open space management and conservation plan (OSMCP) where landscaping, fuel modification, and/or grading are proposed in conjunction with development. Where appropriate, the OSMCP will also establish landscaping, grading and/or maintenance guidelines to mitigate any adverse development impacts on Preservation Area lands to be conveyed. The OSMCP may also contain procedures for the conveyance of land and or easements at subsequent levels of development approval pursuant to the Implementation Actions Program.

2. **Compatibility Techniques.** These techniques are methods of landscaping transition zones and/or development areas which allows development to interface with conservation and open space areas in a manner which mitigates adverse impacts on Preservation Areas to be conveyed. Typically these techniques are employed in transition zones areas and allow for the potential the continued use of habitat and wildlife areas.
  3. **Fuel Modification Zones.** These zones are defined as areas adjacent to development that utilize a graduated clearing of vegetation and selected plant palattes to reduce fuel loads.
  4. **Plant Palattes.** The plant palattes utilized in the transition and fuel modification zones should be selected for the following characteristics: drought tolerance, wildlife food value, fuel loading and slope stabilization.
  5. **Public Trails.** Public access shall be provided, where appropriate, adjacent to development areas abutting the trail and in accordance with adopted biking, hiking and equestrian trail, Master Plans,
  6. **Maintenance Responsibility.** The transition and fuel modification zones will be maintained by the appropriate property and/or homeowner associations and/or maintenance district.
- d. Mitigation banks in the San Joaquin Marsh may be created for selected development in the City and its sphere of influence.
1. That portion of the Preservation Area in San Joaquin Marsh subject to the "Habitat Enhancement and Wetlands Program" (approximately 85 acres) will be dedicated to the University of California in accordance with said Program.
  2. That portion of the Preservation Area in San Joaquin Marsh not subject to the above program (see area "p" in District N on Figure L-4) may be used as a mitigation bank for development impacts in development areas adjacent to the marsh and in other locations throughout the City. Riparian habitat within development areas may be modified subject to applicable State and Federal regulatory requirements of the United States Fish and Wildlife Service and the Department of Fish and Game and mitigation for such modification may be accomplished off site in the San Joaquin Marsh.
- e. Significant riparian areas in Preservation Areas will be maintained as natural corridors and sources of shelter and water for wildlife, except where required for infrastructure.
- f. Intensive human use in Preservation Areas shall be located away from areas with rare or endangered species, including migratory bird species and rare plant species.
- g. The enhancement of habitat areas, particularly riparian habitat, shall be allowed in all Preservation Areas in mitigation for any development impacts in other areas. The City shall promote agreements between the California Department of Fish and Game and the landowner to accomplish the creation of new habitat in Preservation Areas consistent with applicable standards and procedures.



- h. The City will seek to work cooperatively with the California Fish and Game Department to initiate a cooperative research project to identify wintering foraging preferences of the Canadian Geese. This may include further research efforts to band/tag Canadian Geese to investigate and monitor their movements in the wintering area.
- i. The City will seek to maintain and preserve the habitat components essential to the Canadian Geese. Measures may include eradicating the wild Artichoke, protecting foraging areas from public access during wintering months, and minimizing disturbance of the Geese.

### OBJECTIVE L-3 GEOPHYSICAL HAZARDS

Minimize the danger to life and property from geophysical hazards, including, but not limited to, unstable soils, liquefaction, steep slopes, and floodways.

#### Implementing Actions:

- a. Continue to coordinate General Plan level hazard information (i.e. Safety and Seismic Elements) to determine the level of hazardous condition(s) potentially affecting any proposed development.
- b. Land which is unsuitable for development because of hazards to public health, safety, and welfare should be considered for an open space use.
- c. Develop a program emphasizing public safety for geophysically hazardous areas.
- d. The following actions apply only to Dam inundation Areas as identified in the City's Master Environmental Assessment;
  1. Prior to approval for a tentative map within a dam inundation area, require an analysis of the inundation hazards and measures available to minimize risks to persons working or residing in the area be identified. All feasible measures identified shall be included as conditions of the tentative map.
  2. For development within a dam inundation area, the City shall prepare an emergency evacuation plan pursuant to Government Code 8589.5 if, following a review of the inundation maps, the director of the California office of Emergency Services finds that there exists a risk of injury or death as a result of partial or total dam failure. Should there be a previously approved emergency evacuation plan in effect for the area, that plan shall be updated in light of the current and proposed land uses and the revised plan shall be reconsidered by the State Director of Emergency Services.
  3. Prior to the issuance of grading permits within a dam inundation area, the submittal of a statement which assesses the effect of the project upon existing hazards and which includes revised dam inundation maps reflecting changes, in any, resulting from the proposed development and its effect upon existing hazards and inundation boundaries.
  4. Prior to the submittal of approvals for issuance of building permits within a dam inundation area, require the submittal of a document which will serve as an information notice to future property owners regarding dam inundation hazards and the existence of emergency evacuation plans for the area, if any.

## OBJECTIVE L-4 GEOPHYSICAL RESOURCES

Utilize and preserve geophysical resources, including, but not limited to, ridgelines, hillsides, and waterways, as part of the City's land use pattern.

### Implementing Actions:

- a. City and its Sphere of Influence: The following actions apply to all areas of the City and its sphere of influence:
  1. The City encourages the use of clustering approaches, landscaping, and grading techniques which will minimize actual and visual impacts on the City's valuable hillsides.
  2. Continue to coordinate General Plan level resource information (i.e. Urban Design, Scenic Highways, Parks and Recreation, and Cultural Resources Elements) to determine the level and type of resource(s) potentially within any proposed development.
  3. Promote the development of a flood control channel to handle projected flood waters of the San Diego and Peters Canyon Washes and where practicable, require that the channel be a natural swale channel with grass or other natural planting as an integral part of its design as opposed to a concrete design.
  4. Require future development to specify consideration of waterways in environmental impact reports.
  5. Pursue waterway preservation policies without prejudicing drainage, water conservation, storage, and flood control purposes.
  6. Where possible, the City should develop small lakes around existing waterways.
  7. Promote the development of all lakes and reservoirs for the public use and do not allow residential development at their edge.
  8. Where possible and practicable, the appearance and ecology of certain existing natural drainage channels shall be studied to determine which channels or portions thereof, conservation measures shall be applied to. Channels or portions of channels, determined to be suitable for preservation purposes may be modified to enhance their ecology, long term viability and maintenance. Those channels or portions of channels shall be integrated into the design of the surrounding development.
  9. Alternations of major creek courses and bottoms should be minimized.
  10. Require water runoff from Planning Area 23 to be directed away from the San Joaquin Marsh.
  11. No net loss quantity or quality of surface and subsurface water flow into the San Joaquin Marsh shall occur as a result of development in Planning Area 23.
- b. Sphere of Influence. The following actions apply to only hillside areas within the City's sphere of influence.

1. Where modifications of the natural topography is necessary, it should result in no significant change in the general configuration of the topography.
  2. Building development should be located on sites which minimize the need for grading or removal of native plant material (except for fire trails).
  3. Any access roads or highways that must pass through hillside areas are to be the least environmentally damaging, feasible alternative which minimize the impacts to the hillside ecological and/or aesthetic characteristics.
  4. Hillsides, in their natural state, absorb rain runoff and help protect lowlands from flood hazards. Any proposed development in hillside areas are to be the least environmentally damaging feasible alternative which minimizes flood hazard and runoff impacts to the lowlands and hillsides.
  5. All proposed development in the hillside areas shall be subject to a detailed environmental impact report.
  6. Future development proposals should include standards or criteria for the identification and preservation of visually significant natural features (i.e., skylines, major ridgelines, prominent rock outcroppings, ridges, and oak woodlands).
  7. Grading standards should be developed which reflect sensitivity to land form, habitat, watershed protection, and appropriate use intensities.
  8. Cluster housing techniques should be encouraged in hillside areas.
  9. Variations in minimum lot sizes may be proposed for lands when the area is designated estate density residential and it can be demonstrated that steep terrain and ridgelines will be preserved as natural, private open space.
- c. Hillside District. The following actions only apply to areas within the "Hillside District" established by the Hillside Development "HD" Overlay District Ordinance.
1. See Land Use Element Objective A-8.



## OBJECTIVE L-5 SOCIETAL HAZARDS

Minimize the danger to life and property from societal hazards including but not limited to Aircraft Accident Potential Zones (APZs), aircraft and vehicular noise, and landfills.

### Implementing Actions:

- a. Continue to coordinate General Plan level hazard information (i.e., Circulation, Noise, Waste Management, and Safety elements) to determine the level of hazardous condition(s) potentially affecting any proposed development.
- b. Land which is unsuitable for development because of hazards to public health, safety, and welfare should be considered for an open space use.
- c. Develop a program emphasizing public safety for hazardous areas.

## OBJECTIVE L-6 SOCIETAL RESOURCES

Utilize and maintain societal resources, including, but not limited to, archeological historical and paleontological resources, as part of the City's land use pattern.

### Implementing Actions:

- a. Continue to coordinate General Plan level resource information (i.e. Urban Design, Scenic Highways, Parks and Recreation, and Cultural Resources Elements) to determine the level and type of resource(s) potentially within any proposed development.
- b. Land which contains significant resource(s) should be considered for an open space use.

## OBJECTIVE L-7 PRESERVATION AREAS

Maintain and preserve large, contiguous areas which contain significant multiple hazards and resources.

### Implementing Actions:

- a. Consistent with Objective L-1 obtain lands through grant and/or easements for transition areas designated as Preservation Areas as shown on the Conservation and Open Space Element and Land Use Element maps.
- b. Prior to transfer to public ownership, agricultural uses as defined in the City's existing zoning ordinance and other uses consistent with the Preservation category will be allowed in Preservation Areas, consistent with the definitions in response to Issues, 3(a) in this element. Agricultural uses on the frontal slopes of Quail Hill (P-11 and P-12 as shown on Figure L-3) will be limited to cattle grazing. Landform, vegetation, and drainage modifications pursuant to all allowable uses will be permitted except in riparian vegetation areas. Riparian vegetation will not be significantly modified, except as necessary to provide fire protection, access roads, and flood control, drainage, water, sewer and utility facilities, and except where habitat is to be enhanced as part of a mitigation program approved by the California Department of Fish and Game. The City will facilitate the interim preservation of the land by entering Williamson Act contracts if requested by TIC. TIC may convey land or easements in Preservation Areas to public agencies and utilities for road, transportation, transit, drainage, flood control, water, sewer and utility purposes.
- c. Participate in cooperative efforts with Federal, State, County agencies, and land owners in planning and preserving regionally significant conservation and open space areas within the City and its sphere of influence (Lomas Ridge, Bommer and Shady Canyons, and San Joaquin Marsh).

In recognition that the Preservation Areas within Districts D, E and F are also within or adjacent to the County of Orange's proposed Limestone Regional Park, the Preservation Areas within Districts D, E and F shall be conveyed to a public agency acceptable to the City and the County of Orange in order that the land shall eventually be integrated into and become a functional part of Limestone Regional Park, including integrated operations and maintenance which meet the open space objectives of the City.

- d. Explore with the appropriate County agencies the possibility and feasibility of joint-use or other similar concepts of developing and maintaining large regional wilderness areas/parks in Preservation Areas such as the Lomas Ridge and Bommer and Shady Canyon areas.
- e. Significant riparian areas within Preservation Areas will be maintained as natural corridors, sources of shelter, and water for wildlife.
- f. Minimize intensive human use in Preservation Areas which sustain rare or endangered species, including migratory bird species and rare plant species.
- g. Preserve and enhance the San Joaquin Marsh as a habitat resource and mitigation bank through implementation of the "San Joaquin Marsh Habitat Enhancement and Wetlands Creation Program." (See Biotic Resources Implementing Action L-2, d)

- h. Where modifications of the natural topography are necessary in Preservation Areas, the least environmentally damaging and feasible alternatives should be sought.
- i. Any public road, arterial highway, transportation corridor, or utility that must pass through Preservation Areas are to be the least environmentally damaging feasible alternative to the Preservation Area's environmental characteristics.
- j. Alterations of all drainage courses in Preservation Areas should be minimized.



## OBJECTIVE L-8 RECREATION AREAS

Develop and maintain a network of recreational areas that provide a variety of recreational opportunities, and which link and integrate other conservation and open space areas into the land use fabric of the City.

### Implementing Actions:

- a. Consistent with Objective L-1, obtain lands designated Recreation Areas as shown on the Conservation and Open Space Element and Land Use Element maps.
- b. Continue to coordinate General Plan level recreational opportunities (i.e., Urban Design, Circulation, and Parks and Recreation Elements) to ensure adequate and timely development of recreational areas.
- c. Develop a network of open space spines as graphically depicted on the Land Use Element and Conservation and Open Space Element diagrams, and further described below.
  1. Open Space Spine Conveyance. Conveyance of designated Open Space Spines shown as S-IB, and S-3, on Figure L-3 and the minor Preservation Areas P-3, P-8, P-9, P-10, and P-13 as shown on Figure L-3 shall be made consistent with paragraph L-1, b, 5 in conjunction with the recordation of final tract maps for adjoining development.
  2. Conveyance of Open Space Spine S-IA as shown in Figure L-3 shall be made consistent with paragraph L-1, b, 5 in conjunction with the recordation of the final tract map for District O.
  3. The Peters Canyon and Hicks Canyon Open Space Spines as defined by mutual agreement between the Company and City (generally shown as S-5 and S-6 on Figure L-3 shall be conveyed consistent with paragraph L-1, b, 5 in conjunction with the recordation of final tract maps for adjoining development.
- d. As part of the zoning and concept plan request for a planning area and/or implementation district area (Figure L-3) containing the open space spines identified below, a conceptual site plan for the treatment of the open space spines shall be submitted to the City by the applicant. The conceptual site plan shall encompass the entire open space spine within the planning area and/or implementation district.

The plan will establish the general relationship of the open space spine to adjacent developments. The plan shall address at a minimum the following items: 1) type of trails 2) landscape elements; and 3) other special design features.

The plan shall be adopted and incorporated into the appropriate development approvals (i.e. Zoning Ordinance and Concept Plan). Further policies regarding individual open space spines are listed below.

1. Peters Canyon Wash Corridor: The Peters Canyon Wash Corridor is a north/south open space spine that links regional open space areas outside the City and its sphere of influence to open space areas inside the City and its sphere of influence. The Peters Canyon Wash Corridor is defined as the Peters Canyon Wash Flood Control Channel and the areas immediately adjacent to the channel along both the east and west edges. These policies apply to Planning Areas 1, 4, 7, and 10 as defined in the General Plan.
  - A variety of land uses are permitted in this corridor as indicated on the land use plan, including residential, commercial, industrial, institutional, parks, roads, as well as hiking, bicycling, and equestrian trails. These uses shall be developed in the locations shown on the land use plan, that is other uses may not be substituted and the arrangement of the uses cannot be revised without a general plan amendment.
  - The design of the Wash shall be integrated into the design of the adjacent land uses in the corridor through the use of landscaping materials, complementary open spaces, continuous trail systems, and similar techniques.
  - Adaptive, drought-tolerant plant materials should be utilized whenever possible to minimize future maintenance needs.
  - An extra attempt should be made in the design of the Peters Canyon Wash Corridor to enhance its perception as a natural amenity when viewed from the Santa Ana Freeway, Walnut Avenue, and Irvine Center Drive. A special landscape treatment shall be provided where each of the above identified roadways cross the Peters Canyon Wash. Because of the importance attached to the Santa Ana Freeway crossing, a minimum area of four



acres shall be reserved on each side of the freeway. The configuration and amount of this acreage to be located on each side of the Peters Canyon Wash, and immediately adjacent to the freeway shall be determined through a conceptual plan submitted at the time of zoning (see Policy No. 9). If a project area that is submitted for zoning is located on only one side of Peters Canyon Wash and adjacent to the Santa Ana Freeway, then the conceptual site plan shall establish the design concept for the entire four-acre landscape feature where the channel crosses that side of the freeway.

- Berms, walls, landscaping, and other techniques shall be used between the wash and the industrial and commercial uses to screen unattractive elements of those uses from residential and open space areas.
- Uses which are included in the Peters Canyon Wash Corridor and which are open space in nature such as parks, greenbelts, recreation areas, trails, and parking areas should be located adjacent to the Wash wherever feasible to enhance the open space character of the Peters Canyon Wash Corridor. Special consideration shall be given to the relationship between neighborhood parks and the Peters Canyon Wash Corridor.
- As part of the first request for zoning involving an area adjacent to Peters Canyon Wash, a conceptual site plan for the treatment of the Peters Canyon Wash Corridor shall be submitted to the City by the developer for that area to be zoned. This plan shall be developed to illustrate the compatibility of the proposed development with these policies. The conceptual site plan shall encompass a study area which measures 500 feet from the channel's centerline or which is defined by the nearest paralleling arterial roadway whichever is less. The plan will establish the general relationship of the Peters Canyon Wash Corridor to the adjacent developments, and will not be construed as a precise design, but rather the basis for establishing development standards for a variety of interface conditions between the Wash and adjacent development. The development standards derived from the conceptual site plan shall be incorporated within the Planned Community Ordinances. Subsequent zoning submittals for other development areas located adjacent to Peters Canyon Wash shall

also be accompanied by conceptual site plans. These plans shall reflect the previously adopted design standards which provide for overall continuity within the setback area throughout the length of Peters Canyon Wash within Planning Area 10. These elements will include trails, landscape elements, and other special design features. Preliminary site plans shall be submitted for approval by the Planning Commission prior to residential tentative subdivision maps. Final site plans must be submitted for approval by City staff prior to building permit issuance. Existing nearby residential areas shall be notified of the filing of these site plans and be provided an opportunity to comment prior to approval.

- A minimum building and parking setback of 25 feet with an average building setback of 35 feet shall be provided on the westerly edge of the Wash. Standards for the reservation of open space on the easterly side of Peters Canyon Wash shall be developed as part of the open space (greenbelt) study, and in no event shall zoning be granted prior to development of standards for the preservation of open space easterly of the Wash.
- The Peters Canyon Wash Corridor should be designed in coordination with the Orange County Flood Control District, the Army Corps of Engineers, and the City of Irvine.
- The corridors should provide adequate flood control protection in accordance with the City and County requirements.
- The design of the flood control channels and adjacent land uses shall be well integrated, especially where parks can be located adjacent to the channels.
- Linear parks adjacent to the channel shall be a minimum of 150 feet wide.
- The corridors should be designed to accommodate and provide continuity for transit and trail systems adopted in the General Plan Circulation Element for that area.
- Access to the commercial sites by both vehicular and nonvehicular means shall be maximized.



2. San Diego Creek: The San Diego Creek is an east/west open space spine that links together recreational and preservation areas within the City. The San Diego Creek Open Space Spine is defined as the San Diego Creek Flood Central Channel and the areas immediately adjacent to the channel.

The following policies apply only to Planning Area 13 as defined in the General Plan. For the purposes of these policies, Planning Area 13 open space corridors are defined as the San Diego Creek and the Edison substation transmission line right-of-way, and the areas immediately adjacent to these corridors as depicted through the approved concept plan.

- The types of uses which are permitted within these corridors are limited to conservation and open space uses. These include both passive and active open space and recreational uses, natural or man-made water courses, and trail systems.
- The corridors shall be integrated with adjacent land uses through the use of elements such as landscaping materials, complementary open spaces, greenbelts, appropriate setbacks, and continuous trail systems. Except for these integrative elements, the San Diego Creek corridor area shall be maintained in a natural state, insomuch as the adequate flood control standards are met as required by the City, County, and State.
- Adaptive, drought tolerant plant materials should be utilized whenever possible to minimize future maintenance needs and costs.
- Any improvements within the corridors should enhance their perception as natural open space amenities, to the extent feasible, when viewed from the surrounding highways and freeways.
- Berms, walls, landscaping, and other techniques shall be used between the corridor area and adjacent industrial, commercial, and institutional uses to screen unattractive elements of these uses from the corridors.

- Uses which are open space in nature such as parks, greenbelts, recreation areas, and trails should be located adjacent to the San Diego Creek whenever feasible to enhance the open space corridor system.
- Guidance of development within these open space corridors shall be provided by conceptual plans submitted to the Director of Community Development for review and approved by the Planning Commission. These plans shall delineate the treatment of the open space areas encompassed by the Edison right-of-way and the San Diego Creek.
- The corridors should be designed in coordination with the Orange County Flood Control District, the Army Corps of Engineers, California Department of Fish and Game, Southern California Edison, and the City of Irvine.
- The corridors should be designed to accommodate and provide continuity for intra-city transit and trail systems adopted in the General Plan Circulation Element for that area.

3. Planning Area 12:

The following policies apply only to Planning Area 12 as defined in the General Plan. For the purpose of these policies, Planning Area 12 open space corridor is defined as the San Diego Creek, and the areas immediately adjacent on either side of the San Diego Creek.

- The types of uses which are permitted within the corridor are limited to conservation and open space uses. Specifically, these are passive and active open space and recreational uses as permitted in the Preservation and Recreation Areas definitions.
- The design of the San Diego Creek flood control facility should incorporate channel stabilization and sediment control methods which optimize the avoidance of impacts on the existing wetland habitat and meet the Orange County Flood Control District design criteria for flood control improvements.
- Existing wetland habitat that can be retained will incorporate a portion(s) of the existing San Diego Creek. On-site mitigation is encouraged to augment the existing habitat at areas which are retained. The precise size, location and opportunities for

public access to the preservation area shall be determined in cooperation with U.S. Fish and Wildlife Service, California Fish and Game and other applicable resource agencies.

- The improve San Diego Creek corridor shall be integrated with adjacent land uses through the use of elements such as landscaping materials, complementary open spaces, greenbelts, linear park, appropriate setbacks, and continuous trail and hiking system. The improved corridor may potentially establish additional on-site wetland biotic resources while serving to provide the necessary 100-year flood storm protection for the surrounding area.
- Adaptive, drought tolerant plant materials should be utilized whenever possible to minimize future maintenance needs and costs.
- Berms, walls, landscaping, and other techniques shall be used between the corridor area and adjacent residential, commercial, and institutional uses to screen unattractive elements of these uses from the corridor.
- Uses which are open space in nature such as parks, greenbelts, recreation areas, and trails should be located adjacent to the San Diego Creek whenever feasible to enhance the open space corridor system.
- Guidance of development within this open space corridor shall be provided by conceptual plans submitted to the Director of Community Development for review and approved by the Planning Commission. These plans shall delineate the treatment of the open space areas encompassed by the San Diego Creek.
- The corridor should be designed in coordination with the Orange County Flood Control District, the Army Corps of Engineers, California Department of Fish and Game, Southern California Edison, and the City of Irvine.
- The corridor should be designed to accommodate and provide continuity for intracity transit and trail systems adopted in the General Plan Circulation Element for that area.



4. Jeffrey Road Open Space Spine: The Jeffrey Road Open Space Spine is a north/south spine that generally traverses the City's center (see Figure L-8). The following implementing actions apply only to that portion of the spine in Planning Area 12.

- Jeffrey Road Open Space Spine. The Jeffrey Road Open Space Spine will provide a continuous open space edge of variable width along the eastern side of the ultimate alignment of Jeffrey Road. Except for utilities and general plan roadway improvements, surface uses will be limited to trails and associated passive public recreation and park and ride facilities. It will be composed of the following gross areas generally depicted on Figure L-8.

Additionally, should a park-and-ride facility be located in the Open Space Spine (i.e. southeast corner of Jeffrey Road and I-5), The Irvine Company may convey that portion of the Open Space Spine needed for the facility to Caltrans or other appropriate public agency.

- Parcel S-IB.

Between I-405 and the Barranca Parkway, the spine shall total 14 gross acres. The width of the spine at the southern end, abutting the Edison ROW-1 shall be greater than the average width of Parcel S-IB.

- Edison Row-2 and 3.

The spine for the portion of Jeffrey Road adjacent to the existing Edison right-of-way shall lie within that right-of-way.

- Parcels S-IA and S-IC.

Between I-5 and Barranca Parkway, the spine shall be 16 gross acres. A park and ride facility may be located in the spine. Should a park and ride facility be located in the spine (i.e. southeast corner of Jeffrey Road and I-5), The Irvine Company may convey that portion of the spine needed for the facility to Caltrans or other appropriate public agency.

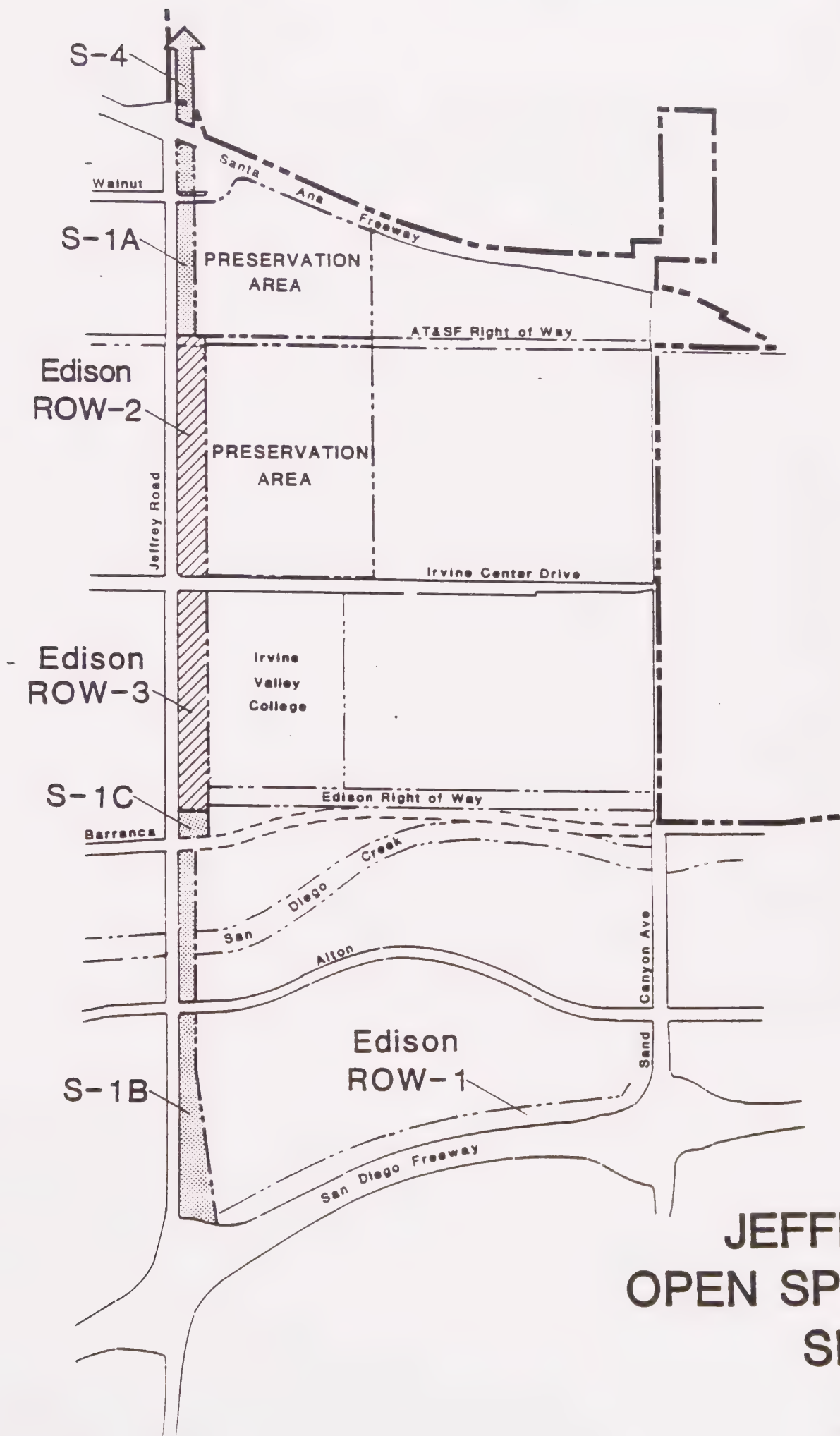


- Parcel S-4.

Between I-5 and the Preservation Area in the Lomas de Santiago Ridge, the spine will average 300 feet in width. The Company acknowledges the importance of completing the link of the Jeffrey Spine between the I-5 Freeway and the Lomas de Santiago Hills. The Company agrees to include plans for the spine with future development programs (either in the County or the City) for the land easterly of this spine in Planning Areas 6 and 9 and, pursuant to acceptable dedication agreements with the appropriate jurisdiction, provide offers of dedication for the spine. The City acknowledges and affirms its intention to cooperate in and coordinate planning efforts to arrive at mutual agreement on appropriate land use designations for this area pursuant to the Annexation Policy Agreement between the Company and the City dated February 8, 1984.

5. Northwood Railroad Right-of-Way: The Northwood Railroad Right-of-Way open space spine is an east/west spine that is primarily located within the Northwood Planning Area (8).

- The open space spine shall follow the abandoned Northwood railroad right-of-way and be developed as bike and hiking greenbelt trail system.
- Encourage the extension of the open space spine through Planning Area 4 and/or 7 (at the time of zoning/concept plan) in order to connect with the Peters Canyon Wash Corridor open space spine.
- Encourage the connection of the open space spine to the Jeffrey Road open space spine in Planning Area 9.



# JEFFREY OPEN SPACE SPINE

6. Hicks Canyon Wash: The Hicks Canyon Wash open space spine is an east/west spine that is located in the City's northern sphere of influence. The Hicks Canyon Open Space Spine is defined as the Hicks Canyon Wash and the areas immediately adjacent to the channel.
- At the time of zoning and/or concept plan for Planning Areas 1 and 2, a conceptual site plan for the treatment of the Hicks Canyon Wash Open Space Spine shall be submitted to the City by the developer for review and approval. The plan will establish the general relationship of the open space spine to the adjacent development. The plan shall address the following items: 1) the overall setback throughout the length of the open space spine; 2) connections with the Peters Canyon Wash Corridor and Jeffrey Road Open Space Spines; 3) type of trails; 4) landscape elements; and 5) other special design features. Preliminary plans shall be submitted for approval by the Planning Commission at the time of residential tentative subdivision approvals. Final plan must be submitted for City approval prior to building permit issuance.
  - The Hicks Canyon Wash Open Space Spine should be designed in coordination with the Orange County Flood Control District, the Army Corps of Engineers and the City of Irvine.
  - The Hicks Canyon Wash Open Space Spine shall be designed to accommodate and provide for the trail systems adopted in the General Plan Circulation Element.
7. Edison Easement: The Edison Easement open space spine is an east/west spine that is located generally in the City's center (Planning Areas 15 and 38).
- The open space spine shall follow the Edison Easement and be developed to accommodate the trail systems provided for in the adopted General Plan Circulation Element.
  - At the time of zoning and/or concept plan for Planning Area 38, a conceptual site plan for the treatment of Edison Easement Open Space Spine within Planning Area 38 shall be submitted to the City by the developer for review and approval. The plan will establish the general relationship of the open space spine to the



adjacent development. The plan shall address the following items: 1) the overall setback treatment within Planning Area 38; 2) connection with the Peters Canyon Wash Corridor; 3) type of trails; 4) landscape elements; and 5) other design features.

8. I-405/Edison Easement: The I-405/Edison Easement open space spine is an east/west spine that is located in the City's center (Planning Areas 12, 14, and 15).
  - The open space spine shall follow the I-405/Edison Easement and be designed to accommodate and provide for the trail systems adopted in the General Plan Circulation Element.
  - At the time of entitlement for Planning Area 12, a conceptual site plan for the treatment of the open space spine within Planning Area 12 shall be submitted to the City by the developer for review and approval. The plan will establish the general relationship of the open space spine to the adjacent development. The plan shall address the following items: 1) the overall setback treatment within Planning Area 12; 2) connection with the Jeffrey Road Open Space Spine; 3) type of trails; 4) landscape elements; and 5) other design features.
9. Mason Regional Park: The Mason Regional Park Open Space Spine is an east/west spine that is located in the southern portion of the City (Planning Areas 21 and 24).
  - The open space spine shall follow Mason Regional Park and be designed to accommodate the trail systems adopted in the General Plan Circulation Element.
  - Coordinate with the appropriate county agencies to ensure that the trail systems are developed.
  - Encourage the connection and extension of the trail system to Planning Areas 16, 21 and 22 open space systems.



## OBJECTIVE L-9 Permanent Agricultural

Protect and preserve agriculture as a viable land use within areas designated Permanent Agricultural on the Conservation and Open Space Element and Land Use Element diagrams.

### Implementing Actions:

- a. Encourage the maintenance of agriculture on a permanent basis in those areas of the planning area designated for permanent agricultural use and in other areas until the time of development.
- b. Preserve range lands, with high quality soils for forage production, and Class I and II soils in parcels of sufficient size to permit:
  - The efficient utilization of best available technology
  - Crop diversity to minimize risk of dependency on few crops
  - Double cropping
  - High yield crops
- c. Promote the permanent use of lands not slated for industrial development or other compatible uses for agricultural purposes within the noise impact areas of MCAS El Toro.
- d. Land which is unsuitable for building because of hazards to public health, safety, and welfare should be preserved in an open space use, such as agriculture.
- e. Agricultural lands should be considered acceptable uses within flood plains and other hazardous areas.
- f. Maintain agricultural usage throughout the City as much as practicable.
- g. Create or preserve a "working model" farm to act as a nature center for education and enjoyment of all age groups.
- h. Encourage and support Federal and State legislation proposed for the purpose of preserving agricultural lands which are compatible with the City's goals and objectives.
- i. Counteract economic forces which make agriculture noncompetitive with urban uses.

- j. Use the California Land Conservation Act of 1965 (Williamson Act) to encourage agricultural uses on an interim basis for land that is designated for development by the General Plan.
- k. The Agricultural land use designation is included in the Land Use and Conservation and Open Space Elements and corresponding diagrams, and is a component of the overall conservation and open space plan. The City feels that any development of these lands would exacerbate the City's jobs-to-housing imbalance and overburden the circulation system.
- l. Agriculture uses are permitted within the Open Space Spine network.
- m. Resolution of any phased dedicating and compensating development opportunities program involving land in the agriculture land use category will occur at the time of annexation.

OBJECTIVE L-10 LANDFILL OVERLAY

Coordinate land planning efforts with the appropriate Federal, State, local agencies, and land owners to minimize deleterious effects on surrounding land uses.

Implementing Actions:

- a. Continue to coordinate General Plan level review of landfill facilities and activities (i.e., Waste Management Element).
- b. At the time of the closure of the landfill explore the possibility with the appropriate agencies and land owners to encourage recreational opportunities and uses as part of the landfill closure plan.

## OBJECTIVE L-11 WATER

Coordinate land planning efforts with the appropriate Federal, State, local agencies, and land owners to encourage the integration of existing and future water sources (reservoirs, lakes, and drainage courses) into development.

### Implementing Actions:

- a. Continue to coordinate General Plan level review of water related issues (i.e., Urban Design and Safety Elements).
- b. Where possible and practicable, the appearance and ecology of certain existing natural drainage channels shall be studied to determine which channels or portions thereof, conservation measures shall be applied to. Channels or portions of channels determined to be suitable for preservation purposes may be modified to enhance their ecology, long term viability and maintenance. Those channels or portions of channels shall be integrated into the design of the surrounding development.
- c. Where possible, the City should develop small lakes around existing waterways.
- d. Where possible and practicable the development of all lakes and reservoirs should be consistent with the implementing actions of Objective L-2, public use should be consistent with subdivision requirements (Government Code Section 66478.12), and residential development should not be allowed at their edge.
- e. Include hiking, bicycling, and equestrian trails in the design of water courses whether they are left in a natural state or channelized. A study should be prepared to determine which water courses or portions thereof can be developed to include these trails.



## Standards

(Reserved) -

## Related Objective Numbers

Land Use Element - A-2, A-3, A-8  
Urban Design Element - B-1  
Circulation Element - D-2, D-4, D-5, D-7  
Scenic Highways Element - E-1, E-2  
Public Facilities Element - G-1  
Safety Element - J-1  
Parks and Recreation Element - K-1  
Conservation and Open Space Element - L-1, L-2, L-3, L-4  
Cultural Resources Element - N-2

## Compliance Regulations

City of Irvine Zoning Ordinance  
Hillside Development Manual  
Irvine Subdivision Ordinance  
California Environmental Quality Act and Implementing Procedures  
Resolution 1036, Eucalyptus Windrow Preservation Policy  
Federal Endangered Species Preservation Act  
California Species Preservation Act  
California Endangered Species Act  
California Fish and Game Code, Chapter 6, Sections 1601 and 1603





## SEISMIC ELEMENT

This element identifies seismic hazards and discusses strategies for reducing death, injuries, damage to property, and economic and social dislocation resulting from earthquakes and other geologic hazards. The Seismic Element is a required component of the Safety Element (California Government Code 65302(g)).

Description of Seismic Activity

A seismic event, or earthquake, is the movement of the earth's crust along a fault. The impact of a seismic event on any given location depends on two factors: geologic setting and geologic conditions. Geologic setting refers to an area's proximity to active earthquake faults. A fault is a fracture in the earth's crust forming a boundary between rock masses that have shifted. An active fault, for planning purposes, is usually defined as a fault that shows movement within the last 11,000 years and can be expected to move within the next 100 years.

Geologic conditions refer to the stability of the soil during an earthquake. For example, loose, unconsolidated soil is more prone to liquefaction during an earthquake than compacted soil or rock. The City of Irvine and sphere-of-influence is located in Seismic Zone 4 as identified in the Uniform Building Code (Section 23-12). The Seismic Element evaluates five general types of geologic conditions called Seismic Response Areas (SRA). The predominant characteristics of the areas are as follows:

- SRA 1: Potential soft or loose soils/high ground water. This is one of the two areas considered to have a greater potential for ground failure in the form of liquefaction, in comparison to the other seismic response areas. Liquefaction is not expected to occur for all earthquakes, nor over the whole of SRA 1.
- SRA 2: Denser soils/deeper ground water. The predominant potential seismic hazard in this area is ground motion. Ground breakage and/or ground failure is not expected to characterize this area. Localized liquefaction potential is remote.
- SRA 3: Shallow alluvium over and abutting bedrock. Ground motion is the primary potential seismic hazard. As a slope increases in this area, slope instability potential increases. Localized liquefaction potential is remote.
- SRA 4: Highlands characteristically over 20% slope. Area is, in general, potentially less stable than in SRA 3 due to the larger incline. Liquefaction potential is extremely remote.
- SRA 5: Less stable geologic formations. These are areas representing existing mapped landslide areas. As such, potential for slope instability is higher than in SRA 4.

SRA's describe the different types and magnitudes of potential seismic hazards, making it possible to evaluate the risks of property damage, personal injury, and loss of vital services which may result from an earthquake. Due to the strong relationship between this element and the Safety Element, they should be considered together in identifying the location and type of development permitted in the City, in developing building standards, and in providing services to City residents.



## Existing Conditions

With the exception of the Norwalk Fault, on which there has been some recorded activity north of the City, there are no mapped active faults in the area. There are, however, regional faults considered to be active, which do have an effect on the planning area. The nearest active fault, the Newport-Inglewood, originates north of Inglewood, passes below Newport Bay and Balboa Island and continues south off the coast, possibly as far as San Diego. This fault is capable of generating earthquakes up to a magnitude of 7.5 on the Richter Scale. The Whittier-Elsinore fault system passes the City of Irvine and sphere of influence about ten miles to the northeast. Considered potentially active and exhibiting evidence of large movements in the recent geologic past (10,000 years), it is considered capable of generating earthquakes up to a magnitude of 7.5 as well. The San Andreas fault passes within thirty-five miles of the City and sphere-of-influence and is capable of generating earthquakes of 8.0 on the Richter Scale. Approximately thirty miles to the northeast and parallel to the San Andreas is the San Jacinto fault. This fault has been more active than the San Andreas within the last one hundred years. It is capable of generating earthquakes up to 7.5 in magnitude.

Figure M-1 shows the locations of the SRA's within the planning area. Ground breakage is not expected to occur within the City and sphere-of-influence, however, the area would be subject to ground motion and other effects of earthquakes. The potential for ground failure due to liquefaction is considered greater in SRA 1, than in the rest of the City. Slope instability potential is considered greatest in SRA 5. Careful planning will be necessary to minimize public maintenance costs for development in these areas.

The magnitude of risk will vary from location to location in the City and sphere-of-influence depending upon the land use. Each land use differs from other uses in terms of type of construction, type of occupancy, function, costs, and value of improvements. The Seismic Land Use Compatibility Matrix, Figure M-2, was formulated through an analysis of the seismic hazard potential in the SRA versus the damage expected in various structure types.

Seismic Land Use Compatibility reflects the relative sensitivity of each land use to potential hazards, it does not, however, imply a specific level of risk of hazard. The chart, thus, can be used to provide decision makers with relative risk assessments so that uses and areas with the highest sensitivity are identified, and it can be used as the basis for judging the level of detail of information that should be provided prior to the approval of specific developments. Figure M-2 is not sufficient data in itself, however, to determine the suitability of a specific development on a specific site.

## Trends

A seismic activity report prepared by Woodward-McNeill and Associates shows that the planning area might have a probability of 50% in any 100-year period for one of the following two "study" earthquakes:






- Study Earthquake One: A nearby earthquake (within 10 miles) of moderate magnitude (Richter Magnitude 5 to 6). Such an earthquake could occur on the Newport-Inglewood or Whittier-Elsinore fault systems.

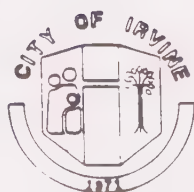
- Study Earthquake Two: A major, distant earthquake (20-40 miles from the planning area) of Richter Magnitude 8 to 8.5 such as could occur on the San Andreas fault.

FIG. M-1



## SEISMIC RESPONSE AREAS

-  SRA-1. SOFT SOILS/HIGH GROUND WATER
-  SRA-2. DENSER SOILS/DEEPER GROUND WATER
-  SRA-3. ALLUVIUM/SHALLOW BEDROCK
-  SRA-4. HIGHLANDS OVER 20% SLOPE
-  SRA-5. LESS STABLE GEOLOGIC FORMATIONS



----- SPHERE OF INFLUENCE

———— CITY BOUNDARY

FIG. M-1



# SEISMIC LAND USE COMPATIBILITY

FIGURE M-2

		IRVINE STUDY AREA				
		Seismic Response Area				
		1	2	3	4	5
LAND USE	Low Density Residential	5	3	4	4	4
	High Density Residential	8	6	7	7	8
	Commercial Center	9	7	8	7	8
	Industrial Buildings	7	4	6	5	7
	Public Facilities	9	8	9	8	9
	Airport / Air Station	7	5	6	6	7
	Flood Control	1	1	1	1	1
	Open Space	1	1	1	1	1

1 = Most Compatible    10 = Least Compatible

SOURCE : Wilsey & Ham, base information provided by Woodward  
McNeill & Associates



The study earthquakes were considered to be severe enough to evaluate potential seismic hazards and have a large enough potential for occurrence to be considered as a credible event during the life of a structure. While a more severe earthquake may occur than the two previously mentioned, an evaluation of potential seismic hazards on the maximum credible event only, might result in inappropriately severe policy implications, when the low probability of such an event happening is taken into account.

#### Identification of Issues

1. The level of seismic hazards to which Irvine will be subjected is not as severe as in other portions of the State. There are few areas in the planning area that should be developed by seismic criteria exclusively. How can the City appropriately regulate development in areas subject to differing levels of risk, thus minimizing the risk of seismic hazards to life and property?
2. In the occurrence of an earthquake, what steps can the City take to minimize loss of life and property?
3. There are approximately 320 parcels in the City of Irvine which contain concrete tilt-up buildings which were constructed prior to City adoption of the 1973 Uniform Building Code. The 1973 Uniform Building Code was the first code to contain seismic restraint requirements. These buildings are in need of retrofit. The City has developed standards for such retrofit.

#### Response to Issues

Seismic hazards can be identified early in the development process through soil research and planning. Other types of hazards, as identified in the Safety Element, should be considered with seismic hazards when planning development in the City. The following goal, objectives and implementing actions have been adopted to address the seismic issues identified.

GOAL M

SEISMIC ELEMENT

---

Reduce to a minimum the loss of life, disruption of goods and services, and destruction of property associated with an earthquake.

---

To achieve this goal, the City of Irvine has adopted the following objectives and implementing actions:

## OBJECTIVE M-1 POTENTIAL HAZARDS

Take potential environmental hazards into account in the General Plan.

### Implementing Actions:

- a. Having identified the locations of seismic potential hazards, take action to minimize the effects of the potential hazard through special development constraints.
- b. Conduct a research program to, through field investigation, ascertain more refined boundaries for Seismic Response Areas, particularly for SRA 1.

## OBJECTIVE M-2 RESPONSE TO HAZARDS

Require all public and private development take appropriate measures to protect public health and safety and to respond to seismic hazards.

### Implementing Actions:

- a. Utilize the information developed in the General Plan for Seismic Response Areas (SRA) so that development occurs in a manner which minimizes the effects of environmental hazards.
- b. Incorporate the proposed seismic overlay zone requirements into the environmental impact review process.
- c. Encourage and cooperate with efforts for a Regional Seismic/Emergency Safety Plan.
- d. Require detailed site studies to ascertain the potential for seismic hazards for facilities which are critical in an emergency. These facilities include but are not limited to:
  - Police and fire stations
  - Municipal government centers
  - Transportation linkages
  - Major public utilities (electrical, water facilities)
  - Designated emergency centers
  - Buildings greater than 15 stories in height.
- e. Require installation of accelerographs to measure seismic movement in appropriate structures.
- f. Designate a "command post" in the vicinity of El Toro Air Station in that it is in an area of expected "least" earthquake damage.
- g. Study an emergency access alternative to and from Pacific Coast Highway, in the event that the road is inoperable after an earthquake or other disaster.
- h. Concurrent with the submittal of an application for a tentative map, a detailed geological and soils engineering shall be required in accordance with the requirements of the Irvine Subdivision Ordinance.
- i. Continue requiring structures to conform to the seismic design requirements found in the Uniform Building Code.
- j. Ensure that the most recent adopted seismic standards are utilized.



### OBJECTIVE M-3 CITIZEN PARTICIPATION

Encourage private citizens to take action to protect themselves.

#### Implementing Actions:

- a. Sponsor earthquake insurance programs for City residents.
- b. Sponsor educational programs to prepare citizens for earthquakes and other natural disasters.
- c. Encourage individual citizens to establish "family emergency disaster plans."
- d. Study methods to encourage citizens to purchase disaster insurance.

## Standards

### Seismic Response Area 1

1. Concurrent with submittal of applications for concept plans and zone changes, as well as the preparation of environmental impact reports within Seismic Response Area (SRA) 1, preliminary geotechnical reports are required for the following uses:
  - a. All planning area level proposals
  - b. Community/regional level shopping centers
  - c. Major commercial/office centers.
  - d. Major public facilities
  - e. Major public utilities
  - f. Major transportation linkages
  - g. Any facility critical to emergency response (hospitals, police, and fire stations, municipal government centers, transportation linkages, and designated emergency centers).
  - h. Major industrial development.

If a geotechnical report so indicates, perform detailed geotechnical report of site prior to filing of site maps for above types of uses.

If a detailed geotechnical report confirms the existence of a seismic hazard, the City has the option to require special earthquake resistant design features or use limitations as is appropriate to the specific case.

### Seismic Response Areas 2, 3, & 4

2. Concurrent with submittal of applications for concept plans and zone changes, as well as with the preparation of environmental impact reports within Seismic Response Areas (SRA) 2, 3 and 4, preliminary geotechnical reports are required for the following uses:
  - a. All planning area level proposals
  - b. Community/regional level shopping centers
  - c. Major commercial/office centers.
  - d. Major public facilities
  - e. Major public utilities
  - f. Major transportation linkages
  - g. Any facility critical to emergency response hospitals, police, and fire stations, municipal government centers, transportation linkages, and designated emergency centers).

If a preliminary geotechnical report so indicates, perform detailed geotechnical report of site prior to filing of subdivision maps for above types of uses.

If a detailed geotechnical report confirms the existence of a seismic hazard, the City has the option to require special earthquake resistant design features or use limitations as is appropriate to the specific case.

## Seismic Response Area 5

Preliminary geotechnical reports shall be submitted with applications for concept plans and zone changes as well as with environmental impact reports for non-open space uses within Seismic Response Area (SRA) 5. Those reports should concentrate on addressing slope instability and probable changes to the environment which would occur if these areas would be developed.

If a detailed geotechnical report confirms existence of potential seismic hazard, the City has the option to require special earthquake resistant design features or use limitations as is appropriate to the specific case.

## Related Objective Numbers

Housing Element - C-5

Safety Element - J-1, J-2

Parks and Recreation Element - K-1, K-2

Conservation and Open Space Element -L-3, L-4, L-9

## Compliance Regulations

California Environmental Quality Act and Implementing Regulations

City of Irvine Zoning Ordinance

City of Irvine Subdivision Ordinance

City of Irvine Uniform Building Code







### III-N

## **CULTURAL RESOURCES ELEMENT**

The Cultural Resources Element recognizes the importance of historical, archaeological, and paleontological resources in the City of Irvine and establishes a process for their early identification, consideration, and where appropriate, preservation. This is an optional element under California Planning and Zoning Law. The Cultural Resources Element is an optional element which if included in local general plans must be implemented (California Government Code 65303).

### Description of Cultural Resources

The City of Irvine has an expressed concern for the development of an increased understanding of and appreciation for the historic and prehistoric heritage of the City. This element was prepared to more fully recognize the importance of historical, archaeological, and paleontological sites in the City and to provide policy guidance for the disposition of significant historic, archaeologic, and paleontological sites and findings. A number of studies and research efforts have been conducted that identify the specific details of the archaeological and historical progression in the Irvine area. It is not the intent of this element to duplicate those efforts, but rather to put their findings into the context of policies that the City, as it develops, will employ in making decisions regarding their treatment.

The following definitions will assist the reader in understanding the material presented in this element:

**Site (Historical):** Any structure, place, or feature which is or may be significant to the post 1542 A.D. history, architecture or culture of the nation, state, region, or community.

**Site (Archaeological):** Any mound, midden, settlement, burial ground, mine, rock art, or other location containing evidence of human activities which took place prior to 1542 A.D.

**Site (Paleontological):** Any area or location containing a trace or impression, or the remains, of plants or animals from past ages.

**Significant Site:** A site which, regardless of size, in the opinion of an historian, archaeologist, or paleontologist and the City, could yield new information or important verification of a previous finding, or be of significant scientific, cultural, educational, or recreational value, either now or in the future.

**Survey:** An on-foot reconnaissance of an area conducted for the purpose of determining the presence or absence of historical, archaeological, or paleontological resources.

### Existing Conditions

The Irvine area has a "rustic charm." Its past is not so much tied to major significant events such as Indian wars, early urban settlements, birth places of important figures in history, or early missions, but rather it is an area rich in the history of the daily evolution of life in the Southern California area. Irvine evolved from an early stage of numerous Indian camps, through an era of Spanish control, to a period of early

"Americanization" with the establishment of several "ranchos." Three of these ranchos were later combined to form the Irvine Ranch, purchased in 1876 by James Irvine.

The historic and archaeological sites recorded by previous surveys are illustrated in Figure N-1. While none of the historic sites within the City are listed in the California Inventory of Historic Resources, many qualify. The planning area, however, does include two sites, Barton's Mound and the Portola Campsite at Tomato Springs, found in the California Inventory. Several of the more important sites may also qualify for listing in the National Register of Historic Places.

### Trends

With much of the planning areas still undeveloped, the opportunity exists to identify cultural resources of significance and develop programs for their appropriate disposition. Already, The Irvine Company has conducted archaeological surveys covering major portions of their property. While these surveys are continuing, the opportunity exists for the city to insure that allowances are made within proposed development plans for the proper disposition of the resources discovered.

Future loss of some cultural resources should be anticipated since alternative uses for many of the existing sites have been designated on the General Plan Land Use diagram. In addition, planned urban uses surrounding historical sites may adversely affect their historical value by altering their traditional settings. Urban uses may also raise surrounding land values so that it becomes economically unfeasible or incompatible for historic uses to remain. Widening of existing roads may also have a negative impact on existing cultural resources.

Although many historic sites may be affected, the Irvine Ranch Headquarters at Irvine Boulevard and Jamboree Road is particularly threatened by proposed uses. The headquarters includes a rather large area with several buildings dating back to 1900. The area of Barton's Mound, a State Historical Landmark, was destroyed as a result of construction of the San Diego Freeway.

With the large number of known archaeological sites existing in the planning area, and their sensitivity to urban development, destruction, or covering of some of these sites should be expected to occur as well. The greatest impact would be in Upper Newport Bay and the Santiago and San Joaquin Hills where large concentrations of important sites are found.

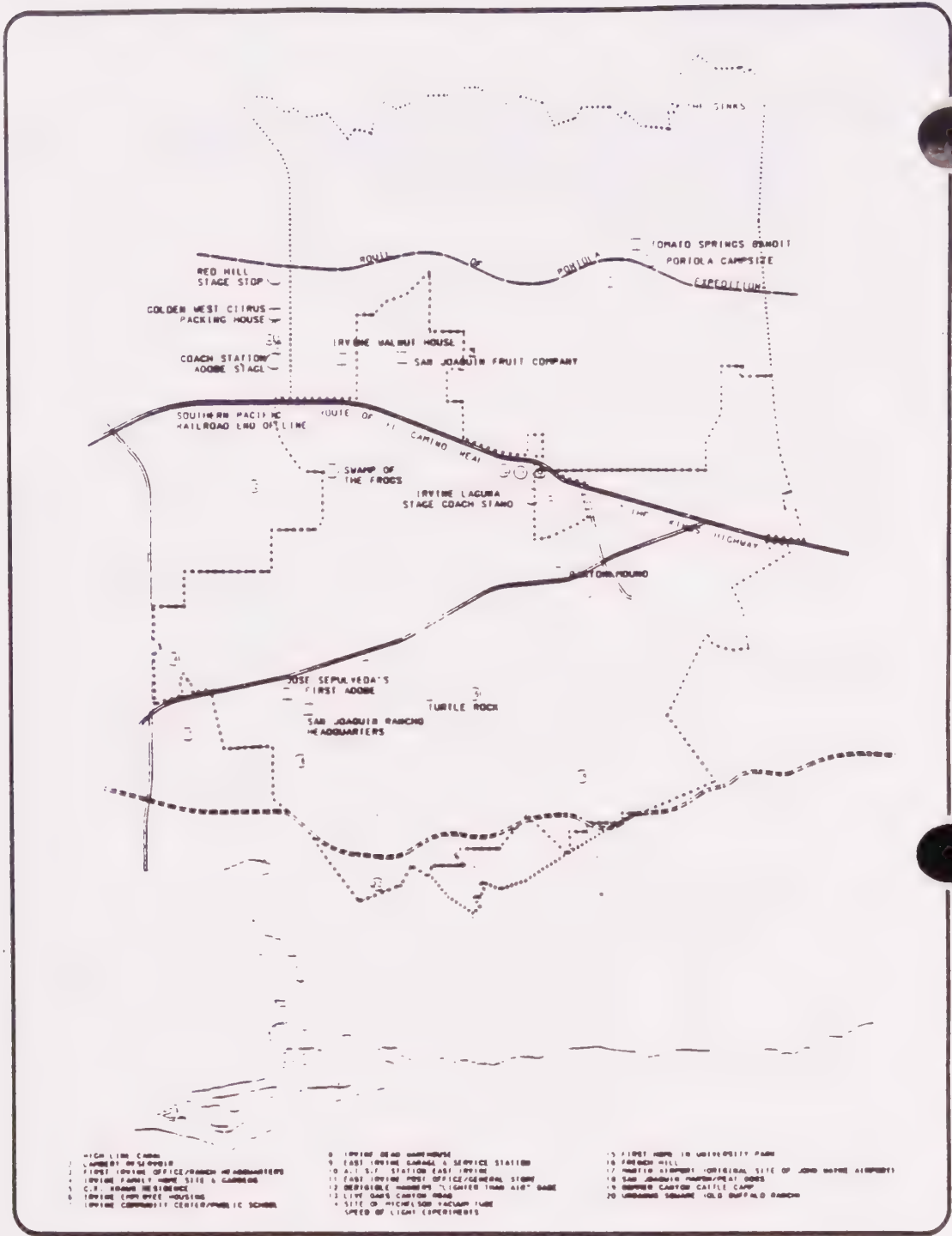
### Identification Of Issues

The following is a summary of the major issues concerning cultural resources in the City of Irvine:

1. Many identified historic, archaeological, and paleontological sites may have been destroyed or covered by existing development. Investigation of archaeological sites on all of the planning area has not been conducted. Many sites and buildings could be considered "low interest finds" in that they are significant to historians, not so much for the intrinsic value, as for their value as a small piece in the large picture of the evolution of the Southern California area. What system should be used to identify and determine the significance of historical, archaeological, and paleontological resources?

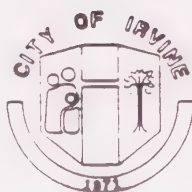
2. Little, if any, public or private funding is available for preservation, and most existing buildings, sites, or potential sites would find it difficult to qualify for available funding. Who should fund the investigations, mitigations, and preservation of cultural resources?





# HISTORICAL & ARCHAEOLOGICAL SITES

FIG. N-1



SPHERE OF INFLUENCE

CITY BOUNDARY

FIG. N-1

### Response To Issues

In 1975, the City foresaw the need to broaden the previously adopted Historical Element of the General Plan. This was in response to the discovery of several important archaeological sites in areas proposed for imminent development. While the City recognized the importance of these resources through its entitlement to use approvals, the existing general plan historical element did not provide a definitive process for the early identification of all three categories of cultural resources or a system for determining their proper disposition.

In response, the City Council adopted an amended element in 1977 containing the following goal, objectives and implementing actions which established a systematic method of resource identification and review.

## GOAL N

### CULTURAL RESOURCES ELEMENT

---

Insure the proper disposition of historical, archaeological, and paleontological resources in order to minimize adverse impacts, and to develop an increased understanding and appreciation for the community's historic and prehistoric heritage, and that of the region.

---

To achieve this goal, the City of Irvine has adopted the following objectives and implementing actions:

## OBJECTIVE N-1 HISTORICAL SURVEYS

Identify and obtain information on the existence and significance of historical, archaeological, and paleontological sites and encourage land use planning which incorporates this information during a project's conceptual design phase.

### Implementing Actions:

- a. Require appropriate surveys and necessary site investigations in conjunction with the earliest environmental document prepared for a project, in accordance with California Environmental Quality Act (CEQA) and the City's CEQA procedures.
- b. Require surveys prior to a change of zone, or initial project approval, for areas where the possibility of encountering sites exists. Additional specific site investigations may also be required in order to obtain sufficient information to determine the site's significance. The project sponsor shall fund this level of investigation.
- c. Require a written report be submitted to the City following a survey or investigation describing the findings and making recommendations as to the site's significance and future disposition, and the amount of further investigation which should be undertaken. Copies of site survey records and reports shall be filed with the appropriate clearinghouse.
- d. Encourage, if appropriate, removal of all materials collected during the survey/investigation to local museums, universities, or other depositories providing access for public review or scientific research.
- e. Maintain information on areas surveyed, numbers of sites located, their status and the names and addresses of individuals or organizations knowledgeable of the sites.
- f. Specific locations of unprotected sites should be held as confidential information to avoid vandalism and the resultant irretrievable loss to the historic and prehistoric record of the community.
- g. Prior to approval of concept plan, zoning or development applications, determine the proper disposition of each historical site in accordance with the provisions of the Cultural Resources Element of the General Plan. Disposition determinations shall be based upon a detailed historical report, including an inventory form, a written evaluation, and slides documenting the building and its location, to be reviewed and approved by the Historical, Archaeological and Paleontological (HAP) Committee and the Irvine Historical Society. Each historical report shall be deposited at the Irvine Historical Museum and the City of Irvine Community Development Department.
- h. At the time of concept plan or zoning review, for sites adjacent to or containing historical resources, sites should be reviewed by the City's HAP Committee for demolition or preservation. The HAP Committee's recommendation shall be forwarded to the Planning Commission for final approval. If the Planning Commission requires preservation of a site and/or historical resources contained therein, methods to buffer and protect the integrity of such resources shall be incorporated into the site plans for the project.



## OBJECTIVE N-2 HISTORICAL PRESERVATION

Evaluate each site recorded in the survey as to its present and potential cultural, educational, recreational, and scientific value to the community and the region, and determine its proper disposition prior to the approval of any project which could adversely affect it.

### Implementing Actions:

- a. Ensure that sites determined to be significant are protected through the City's planning policies, ordinances, and approval conditions.
- b. Encourage the nomination of significant, protected sites to the National Registry of Historic Places.
- c. Include sites which are appropriate for educational or recreational purposes as an integral part of either public or community facilities or as part of the Citywide bikeway, pedestrian, and equestrian trail systems. Encourage agencies, organizations, and individuals to develop interpretive and educational programs in order to properly utilize the site for the benefit of the entire community.
- d. Establish an historical, archaeological, and paleontological committee to study site disposition alternatives and make recommendations to the City Council, Commissions, and staff.
- e. Designate a staff representative to act in matters relating to the implementation of this element to include identification of costs, and to coordinate the investigation and disposition of sites between an advisory committee, City departments and Commissions, The Irvine Company, and other agencies, institutions, organizations, and individuals.
- f. Determine the methods and means of preservation on a case by case basis according to a site's importance and disposition methods available. These may include public or private acquisition or one of the following, provided extreme care is exercised not to adversely affect the site.
  - Inclusion within greenbelts, parks, open space spines, preservation areas or other open space.
  - Coverage by adequate fill, pavement, or buildings of surface or sub-surface sites.
  - Use of the site for nondestructive public interest or educational purposes such as museums, interpretive centers, or outdoor classrooms.
  - Movement of buildings for preservation as part of a consolidated historic site.
  - Utilization of buildings in a preserved state as a part of their functional capacity (e.g., a building preserved and used as an office, restaurant, or home).
- g. Encourage site preservation through economic incentives such as increased building densities, reduced taxes, credit toward park dedication, or reduction of other amenity requirements. Where incentives are not sufficient, the land owner shall be directly compensated by the City or other public or quasi-public agencies or organizations for land preserved as an archaeological, paleontological, or historical site. The costs of site preservation may be the principle responsibility of the City, other public, or quasi-public agencies or organizations.

- h. Ensure that adverse impacts of a proposed project on cultural resources are mitigated in accordance with CEQA, as well as other appropriate city policies and procedures, where preservation of a significant site is not practicable.
- i. Assign the Community Services Commission the responsibility to oversee implementation programs for sites or buildings which have been acquired by the City.
- j. Identify and implement revenue sources which can be expended in support of this objective.
- k. During the next update to the Cultural Resources Element, the City should undertake a comprehensive survey to inventory the remaining historical resources within the City of Irvine incorporated territory and adopted Sphere of influence, including the location and significance of all remaining tenant farm homes over 50 years of age. This survey shall be used to determine the appropriate disposition of the resources located within any area not designated for preservation as a historical resource.

## Standards

### Site Surveys and Investigations

Site surveys and investigations shall be accomplished under the supervision of a qualified person, a person who meets the City's established minimum qualifications for historian, archaeologist, or paleontologist, and who has been approved by the City. Whenever possible, students and other residents, as well as organizations should be encouraged to assist in the investigation.

Survey and investigative reports shall describe the data recovered, and all such data, materials, photographs, and notes should be deposited in an institution where they are available to the public and the scientific community. Provision should be made for the return of these materials at such time as the appropriate facilities are available.

### Funding of Archaeological Excavations

In the case of archaeological salvage excavations, the following cost sharing formula may be used as a guideline: 75% project sponsor; 25% City or other public or quasi-public agency or organization. The costs of other mitigation measures may also be shared by the landowner or developer, the City and other agencies or organizations.

## Related Objective Numbers

Land Use Element - A-2

## Compliance Regulations

The California Environmental Quality Act (CEQA)  
California CEQA Guidelines  
City of Irvine CEQA Procedures







## CHAPTER 0

### GROWTH MANAGEMENT ELEMENT

The purpose and intent of the Growth Management Element (GME) is to mandate that growth and development be based upon the City of Irvine's ability to provide an adequate circulation system and public facilities pursuant to the provisions of Government Code 65302(b) and the Orange County Division, League of California Cities "Countywide Traffic Improvement and Growth Management Program: Growth Management Plan Component."

#### CONCEPTUAL OVERVIEW

With the passage of Measure M, a Revised Traffic Improvement and Growth Management Ordinance was approved by Orange County voters on November 6, 1990. This specific ordinance imposed an increase to the retail sales tax by 1/2 cent for a twenty-year period for the funding of transportation related improvements. All of the gross revenue generated from the retail tax increase are intended to be used solely for transportation projects and programs as identified within the countywide Local Transportation Ordinance Number 2. Specific projects and programs to be implemented are referred to in the Orange County Division, League of California Cities, Countywide Traffic Improvement and Growth Management Program: Countywide Growth Management Plan Component (referred to as "Countywide GMP"), dated June 15, 1989. If member jurisdictions comply with the requirements of the Countywide Growth Management Program, this sales tax will generate a return of retail sales tax and discretionary revenues to each jurisdiction for use on local and regional transportation improvements as well as maintenance of existing roadways.

Although the City of Irvine General Plan currently provides policy discussion regarding growth management, congestion management, air quality, and jobs-to-housing balance, it is the City's goal to participate in on-going countywide efforts to implement traffic improvements while recognizing local land use authority. The intent of the Growth Management Element is to establish the basic policy framework for future implementing actions and programs within a single general plan element. In addition, future amendments to the Growth Management Element may be necessary to reflect the results of the implementation process.

#### GROWTH MANAGEMENT ELEMENT CHARACTERISTICS

The Growth Management Element comprises a series of objectives and implementing actions to carry out the goals of the Countywide GMP. Listed below are the Countywide GMP goals with corresponding General Plan objectives contained in this Growth Management Element.

1. Outline each agency's plans and efforts to develop multi-jurisdictional traffic solutions through a well-defined cooperative planning process.

Refer to Objective O-1, Page 8 - "Cooperative Implementation"

2. Specify traffic level of service standards.

Refer to definitions on Pages 26 & 27 - "Traffic Level of Service Standards"

3. Promote alternative forms of transportation and overall system efficiency by maximizing use of the existing transportation network through Transportation Systems Management (TSM) and Transportation Demand Management (TDM).

Refer to Objective O-5, Pages 15 & 16 - "Transit Systems and Service"

4. Provide funding for construction and maintenance of street, road, and highway facilities.

Refer to Objective O-3, Page 10 - "Roadway Maintenance and Enhancement"

5. Require a locally collected and administered traffic mitigation fee to guarantee that new development pays its fair share toward dealing with traffic generated by the new development.

Refer to Objective O-3, Page 11 - "Roadway Maintenance and Enhancement"

6. Foster a better balance of jobs and housing and attempt to reduce the length of commuter trips through careful planning.

Refer to Objective O-6, Pages 17 & 18 - "Balanced Growth"

7. Provide that local jurisdictions, where applicable, establish performance standards for fire, police, library, flood control, and other infrastructure services based on local criteria.

Refer to Objective O-6, Page 17 - "Balanced Growth"

8. Require the phasing of new development to insure that service goals are achieved.

Refer to Objective O-7, Page 19 - "Phased Growth"



9. Envision the creation of a deficient intersections program to promote funding matches between local fees and proceeds from the sales tax to correct deficiencies.

Refer to Objective O-3, Page 10 - "Roadway Maintenance and Enhancement"

#### TRENDS

Approximately 50% of the potential development identified within the General Plan has occurred or is committed through subsequent planning approvals (i.e., zoning and subdivision). The City realizes that support levels necessary for existing and future transportation facilities be maintained and developed commensurate with expected growth. Since the City of Irvine is centrally located, it is important that coordination of new residential and non-residential development is closely linked with future infrastructure improvements on both a local and countywide level. The Growth Management Element will provide the necessary implementation actions to ensure the coordination of development and infrastructure.

#### EXISTING CONDITIONS

As the City of Irvine and surrounding communities continue to grow, the transportation network must be completed commensurate with new development. While by the adoption of this element, the City does not approve any specific plan or designs of identified transportation or circulation system improvements such as any existing plans for superstreets, the City of Irvine does conceptually support the following relevant transportation programs as identified within the City's Circulation Element:

1. Upgrading of the Newport, San Diego, and Santa Ana Freeways, including the I-5/I-405 interchange.
2. Development consistent with City policy for the proposed transportation tollway corridors.
3. Buildout of existing and proposed major, primary, secondary, collectors, interchanges, and superstreet links.
4. Efficient utilization of existing roadway capacity through advanced traffic management techniques.
5. Promotion of increased ridership through alternate means of travel such as the connection and expansion of High Occupancy Vehicle (HOV) lanes with existing roadways, expansion of public transit routes, and the double tracking of the Los Angeles/San Diego (LOSSAN) railway.



6. Development of a vehicular circulation system responding to local and regional access requirements commensurate with development.
7. Development of a more detailed set of requirements for public facilities and services such as, but not limited to, fire stations, police protection, libraries, flood control, and parks which will be used when determining locations, site sizes, and costs for purposes of precise plans and the City's capital programming process.
8. Provision of public facilities and services such as, but not limited to, fire stations, police protection, libraries, flood control, and parks linked to residential, commercial, and industrial development in accordance with the City's Zoning Ordinance, Subdivision Ordinance and Public Facilities Element of the General Plan.

#### IDENTIFICATION OF ISSUES

1. Future land use and transportation planning policy will require cooperation with surrounding jurisdictions and public agencies. How can the City effectively participate in inter-jurisdictional planning efforts?
2. Adequate transit infrastructure needed for the City will require the integration of both land use and transportation planning. How can the City integrate land use and transportation planning to ensure an adequate transit infrastructure system?
3. The City has established an effective pavement management program to meet the rehabilitation needs of the City's circulation system. How can the City continue to effectively implement the City's pavement management program?
4. Traditionally, the City has provided a circulation system which accommodates flexibility for automobile use. How can the City provide and encourage a full range of alternative modes of transportation?
5. Public transit services are an important and viable alternative mode of transportation. How can the City provide adequate transit services and opportunities to its residents?
6. As the City's residential and non-residential development continues to grow, so will the need for adequate public facilities. How can the City promote balanced growth of residential and non-residential land uses and supporting

public facilities and services?

7. Balancing land use building intensity, circulation capacity and public facilities are integral components of a comprehensive planning approach. How can the City develop a phasing program to incorporate these various components to ensure that existing Citywide services are maintained?
8. To ensure that adequate and appropriate development patterns occur, the City needs various studies and surveys to evaluate population, employment and development data. How can the City monitor development and evaluate its status with respect to the General Plan?
9. The timely expenditure of state, regional and local sources of funds to enhance the City's transportation facilities is an essential factor in receiving future funds. How can the City actively pursue the expenditure of state, regional, and local revenue sources?

#### RESPONSE TO ISSUES

In response to the previously identified issues, this section describes the specific objectives to implement goals of the Growth Management Element.

1. Growth Management Element Objective O-1 establishes a foundation for coordination of land use and transportation planning policy and implementation with state, regional, and local growth management efforts. This objective provides for the participation in inter-jurisdictional planning forums for the Growth Management Areas (GMAs) in which the City is located.
2. Growth Management Element Objective O-2 establishes the integration of land use and transportation planning to provide adequate transportation infrastructure. This is accomplished by correlating the City's land use diagram and statistical tables with the circulation system.
3. Growth Management Element Objective O-3 ensures continued implementation of the City's pavement management program available in order to minimize deferred maintenance of City streets.
4. Growth Management Element Objectives O-4 and O-5 promotes the use of alternative modes of transportation such as bicycling, walking, public transit by providing increased pedestrian access, bicycle trails, High Occupancy Vehicle (HOV) lanes, and public transit systems.

5. Growth Management Element Objective O-6 promotes cooperation with local, county, and state agencies to promote a balanced land use mix.
6. Growth Management Element Objective O-7 ensures through the establishment of a comprehensive phasing program that infrastructure such as roadways and other public facilities are provided as demands increase over time.
7. Growth Management Element Objective O-8, in conjunction with Land Use Element Objective A-1, establishes a Development Monitoring Program (DMP) in order to evaluate development with respect to the General Plan and coordinate monitoring efforts with state, county and local agencies.
8. Growth Management Element Objective O-9 provides for the appropriate expenditure of revenue from state, county, and local sources to enhance transportation facilities and to maintain the City's eligibility for future allocations.

GOAL

GROWTH MANAGEMENT ELEMENT

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To ensure that growth and development is integrally planned with, and phased concurrent with, the City of Irvine's ability to provide an adequate circulation system and public facilities.

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To achieve this goal, the City of Irvine has adopted the following objectives and implementing actions:



## OBJECTIVE O-1 COOPERATIVE IMPLEMENTATION

Coordinate City land use and transportation planning policy and implementation with state, regional, and local growth management efforts.

### Implementing Actions:

- a. Cooperate with the County of Orange, the Orange County Transportation Authority (OCTA), and other local jurisdictions through the Regional Advisory and Planning Council (RAPC) or other duly appointed bodies on the implementation of the Countywide Revised Traffic Improvement and Growth Management Ordinance (Measure M) and the development of future revisions.
- b. Participate in the Inter-Jurisdictional Planning Forums for the Growth Management Areas (GMAs) in which the City of Irvine is a member. The purpose of such forums is to discuss cooperative implementation of traffic improvements, public facility standards, and cooperative land use planning on a countywide basis.
- c. Cooperate with state, county, and local governments for planning and implementing the Circulation Element.
- d. Coordinate population, housing, and employment projections with the State Department of Finance, Southern California Association of Governments, the County of Orange Development Monitoring Program, school districts, and the Irvine Ranch Water District.
- e. Obtain data from regional and local planning sources regarding employment, housing and population projections to serve as a basis for citywide planning and development monitoring programs, including but not limited to:
  - Budgeting and financial forecasting
  - CIP budget and programs
  - General Plan Fiscal Impact Model
  - Irvine Transportation Analysis Program Model
  - Timing and sizing of public facilities
  - Achieving a balanced land use mix
- f. Provide information to the County of Orange for development of a countywide land use summary.

## OBJECTIVE O-2 INTEGRATE LAND USE AND TRANSPORTATION PLANNING

Integrate land use and transportation planning to provide adequate transportation systems which maintain the City's Traffic Level of Service standards.

### Implementing Actions:

- a. Ensure, for purposes of forecasting traffic demand on the regional facilities, that the City's transportation models are consistent with the subregional county model (OCTAM II), and the Southern California Association of Government (SCAG) model through consistent input assumptions (i.e., socioeconomic data, link speeds, etc.) and consistent output.<sup>1</sup>
- b. Utilize the City of Irvine land use diagram and statistical tables (i.e., Figures A-4 through A-10) for the purpose of sizing the basic circulation system.<sup>2</sup>
- c. Coordinate planning and construction of public utilities - state, county, and local - to minimize negative impacts on roadways within the City.<sup>3</sup>
- d. Work with adjacent jurisdictions and the development community in establishing land use and circulation plans for the area north of Planning Areas 1-3 noting that development in this area can have a significant impact on the City.<sup>4</sup>

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<sup>1</sup> City of Irvine General Plan Circulation Element Objective D-1, Implementing Action e

<sup>2</sup> City of Irvine General Plan Circulation Element Objective D-1, Implementing Action a

<sup>3</sup> City of Irvine General Plan Circulation Element Objective D-1, Implementing Action h

<sup>4</sup> City of Irvine General Plan Circulation Element Objective D-1, Implementing Action f

### OBJECTIVE O-3 ROADWAY MAINTENANCE AND CAPACITY ENHANCEMENT

Continue to implement the City's pavement management program, and pursue all funding options available to meet the rehabilitation needs of the City of Irvine infrastructure and minimize the deferred maintenance of City streets.

#### Implementing Actions:

- a. Prepare on an annual basis a Seven (7) Year Capital Improvement Program (CIP) for transportation system improvements including the capital projects needed to meet and maintain both Traffic Level of Service Standards. The Seven-Year Capital Improvement Program (CIP) shall include proposed and approved projects as well as the financial plan for implementation.
- b. Actively lobby with appropriate State commissions, committees, and legislators for funding to upgrade the Newport, San Diego and Santa Ana Freeways, including the I-5/I-405 interchange.<sup>5</sup>
- c. Continue to implement the City's pavement management program.
- d. Properly space and interconnect traffic signals to minimize the number of traffic signals, and minimize the acceleration/deceleration that produces significantly higher vehicular emissions and noise levels.<sup>6</sup>
- e. Establish a Development Mitigation Program to ensure that development contributes its "fair share" of needed transportation system improvements to the City's roadway network associated with that development.
- f. Establish through the Growth Management Area (GMA) Inter-Jurisdictional Planning Forums, a baseline fee to finance necessary multi-jurisdictional improvements. Such a fee may be a new or existing fee program within Irvine.
- g. Require as a condition of new development, that specific roadway improvements needed to maintain appropriate Level of Service Standards be completed no later than five (5) years from the date of issuance of the first grading permit or three (3) years from the date of issuance of the first building permit.

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<sup>5</sup>City of Irvine General Plan Circulation Element Objective D-1, Implementing Action k

<sup>6</sup>City of Irvine General Plan Circulation Element Objective D-2, Implementing Action j

- h. Establish a Deficient Intersection List comprising intersections which: 1) do not meet the Traffic Level of Service Standards for reasons that are beyond the control of the City (e.g., ramp metering effects and traffic generated outside the City's jurisdiction) or due to development project approvals (i.e., Concept Plans, Zone Changes, Master Plans, Subdivision Maps, and Conditional Use Permits) prior to the adoption date of this Element and; 2) are not brought into compliance with the LOS standard in the most current Seven-Year Capital Improvement Program. Additional intersections may be added to the Deficient Intersection List only as a result of conditions which are beyond the control of the City.



#### OBJECTIVE O-4 TRANSPORTATION DEMAND MANAGEMENT

Provide and encourage the use of a full range of alternative modes of transportation including transit systems.

##### Implementing Actions:

- a. Support programs promulgated in the Air Quality Management Plan (AQMP) and City programs such as Spectrumotion and the Trip Reduction Facilities Ordinance which are aimed at increasing the vehicle occupancy rate and reducing vehicle trips and vehicle miles traveled (VMT). These programs:
  1. Promote alternative work schedules, telecommuting, and other methods to spread and lessen work trips over a longer period of time to reduce peak period congestion;<sup>7</sup>
  2. Encourage the designation and construction of High Occupancy Vehicle (HOV) lanes on freeways in the South Coast Air Basin;<sup>8</sup> and
  3. Encourage and promote the use of bicycles and walking<sup>9</sup> including, but not limited to, the following:
    - Planning Areas shall contain an internal system of trails linking schools, shopping centers, and other public facilities with residences;<sup>10</sup>
    - Convenient and direct pedestrian walkways shall link the City;<sup>11</sup>
    - Design and locate land uses to encourage access by non-automotive means;<sup>12</sup>
    - Shopping areas will be located and designed to

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<sup>7</sup> Air Quality Management Plan, AQMP Control Measure 1a "modified"

<sup>8</sup> Air Quality Management Plan, AQMP Control Measure 2f

<sup>9</sup> Air Quality Management Plan, AQMP Control Measure 1b

<sup>10</sup> City of Irvine General Plan Circulation Element Objective D-3, Implementing Action b

<sup>11</sup> City of Irvine General Plan Circulation Element Objective D-3, Implementing Action b

<sup>12</sup> City of Irvine General Plan Circulation Element Objective D-3, Implementing c

encourage pedestrian access;<sup>13</sup>

- Principal trip destinations such as schools, parks, community centers, and shopping centers shall be linked to residential areas via bicycle lanes and trails;<sup>14</sup>
  - The City shall create a system of bicycle lanes within the street right-of-way to meet the needs of both the local and commuter cyclist. The lanes shall be designated for the safety of the cyclist;<sup>15</sup>
  - Traffic signal phasing shall be adequate for bicycle turning and straight-through movements;<sup>16</sup>
  - Trails will be continuous through the Planning Areas matching desired trip routes;<sup>17</sup> and
  - Support efforts related to parking management such as a Citywide Parking Management Study or other similar efforts.
- b. Require the applicants of new developments to submit, at the time of tentative tract map submittal or conditional use permit or master plan review, pedestrian and bicycle circulation plans detailing such access to the subject and adjacent properties in accordance with the Land Use, Conservation and Open Space, Urban Design, and Circulation Elements of the General Plan.<sup>18</sup>
- c. Maintain and, if feasible based on demonstrated need, increase existing levels of funding allocated for transit improvements to supplement other modes of travel.
- d. Prohibit parking on all thruways, parkways, and community

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<sup>13</sup>City of Irvine General Plan Circulation Element Objective D-3, Implementing Action d

<sup>14</sup>City of Irvine General Plan Circulation Element Objective D-4, Implementing Action d

<sup>15</sup>City of Irvine General Plan Circulation Element Objective D-4, Implementing Action e

<sup>16</sup>City of Irvine General Plan Circulation Element Objective D-4, Implementing Action e

<sup>17</sup>City of Irvine General Plan Circulation Element Objective D-4, Implementing Action j

<sup>18</sup>City of Irvine General Plan Circulation Element Objective D-4, Implementing Action k "modified"

collectors to increase the traffic capacity of these arteria

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<sup>19</sup>City of Irvine General Plan Circulation Element Objective D-2, Implementing Action i

## OBJECTIVE O-5 TRANSIT SYSTEMS AND SERVICE

Provide adequate transit services and opportunities.

### Implementing Actions:

- a. Explore a full range of intra-city transit technologies in a detailed transit study.<sup>20</sup>
- b. Adopt a master plan of potential advanced intra-city transit routes.<sup>21</sup>
- c. Work with the Orange County Transportation Authority (OCTA), the development community, and other key participants in bringing additional transit opportunities to the City as well as other Orange County cities.
- d. Coordinate the development of intra-county and regional transit stops with Irvine's intra-city transit system.<sup>22</sup>
- e. Reserve AT&SF right-of-way for OCTA regional transit corridor.<sup>23</sup>
- f. Undertake in coordination with other jurisdictions detailed planning of an advanced transit network (including local and activity center systems) encompassing the City and its Sphere of Influence as illustrated in the City of Irvine Circulation Element Figure D-2.<sup>24</sup>
- g. Plan commercial, industrial, and residential areas so that the use of transit systems could be implemented if and where deemed viable.<sup>25</sup>
- h. Provide direct and convenient pedestrian access from the interior of Planning Areas to public transit stops.<sup>26</sup>

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<sup>20</sup>City of Irvine General Plan Circulation Element Objective D-7, Implementing Action d

<sup>21</sup>City of Irvine General Plan Circulation Element Objective D-7, Implementing Action b

<sup>22</sup>City of Irvine General Plan Circulation Element Objective D-7, Implementing Action c

<sup>23</sup>City of Irvine General Plan Circulation Element objective D-7, Implementing Action i

<sup>24</sup>City of Irvine General Plan Circulation Element Objective D-7, Implementing Action a

<sup>25</sup>City of Irvine General Plan Circulation Element Objective D-7, Implementing Action e

<sup>26</sup>City of Irvine General Plan Circulation Element Objectives D-3 and D-6, Implementing Actions e & f



- i. Continue to participate with neighboring jurisdictions on transportation issues through the combined efforts of the Orange County South Central Traffic Study.

## OBJECTIVE O-6 BALANCED GROWTH

Promote balanced growth of residential and non-residential land uses and supporting public facilities and services.

### Implementing Actions:

- a. Establish and implement residential and non-residential development objectives (e.g., balanced land use mix) every five years concurrent with revisions to the Housing Element.<sup>27</sup>
- b. Participate in the Southern California Association of Governments regional growth management plan and attempt to achieve consistency with regional and subregional goals and policies to achieve a balanced mix of land use including housing, employment, parks and recreation, public services and facilities, and other public amenities.<sup>28</sup>
- c. Participate with the County of Orange in cooperative efforts to coordinate strategies to meet housing, employment, and balanced land use mix objectives.<sup>29</sup>
- d. Address the City's balanced land use mix in conjunction with the review of any General Plan Amendment application that would increase housing and/or employment opportunities.
- e. Evaluate on periodic basis the City's public facility standards to refine levels of service and definitions of convenience to users.<sup>30</sup>
- f. Develop a more detailed set of program requirements for each public facilities system which will be used in refining locations, site sizes, and costs for purposes of precise plans and the City's capital programming process.<sup>31</sup>
- g. Establish a balance of land uses that ensures that the

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<sup>27</sup> City of Irvine General Plan Land Use Element Objective A-9, Implementing Action a

<sup>28</sup> City of Irvine General Plan Land Use Element Objective A-9, Implementing Action c "Modified"

<sup>29</sup> City of Irvine General Plan Land Use Element Objective A-9, Implementing Action d "Modified"

<sup>30</sup> City of Irvine General Plan Public Facilities Element Objective G-1, Implementing Action d

<sup>31</sup> City of Irvine General Plan Public Facilities Element Objective G-1, Implementing Action e

City will be able to provide necessary municipal services.<sup>32</sup>

- h. Encourage the establishment and development of facilities and services consistent with implementing actions concerning, but not limited to, police/fire facilities, libraries, parks, and flood control as identified in the Public Facilities Element.<sup>33</sup>
- i. Use the General Plan Land Use Element Figure A-1 and intensity A-5 through A-18 for sizing basic utility systems.<sup>34</sup>

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<sup>32</sup>City of Irvine General Plan Land Use Element Objective A-5, Implementing Action o

<sup>33</sup>City of Irvine General Plan Public Facilities Element Objective G-1, related Implementing Actions f, i, j, l-n, and p-t

<sup>34</sup>City of Irvine General Plan Land Use Element Objective A-5, Implementing Action d

## OBJECTIVE O-7 PHASED GROWTH

To ensure, through establishment of a comprehensive phasing program, that infrastructure such as roadways and other public facilities and services are provided commensurate with demand; and that development is phased in a manner which quantitatively links residential and non-residential development to the adequate provision of roads, transit and other public facilities and services including, but not limited to, libraries, police, fire, parks and flood control.

### Implementing Actions:

- a. Formulate a Comprehensive Phasing Program comprising two integrated components:
  1. The Infrastructure Phasing Program (IPP) will ensure that infrastructure is added as development proceeds. The IPP shall correlate infrastructure improvements to land use, with specific emphasis on circulation capacity and public facility needs. The IPP shall provide reasonable lead time for the design and construction of specific transportation and other public facilities improvements.
  2. The Development Phasing Program (DPP) will establish the requirement that building and grading permits shall be approved and issued in a manner that assures implementation of required transportation and public facilities improvements. The DPP shall specify the order of improvements and the phasing of residential and non-residential development based, at a minimum, on mitigation measures adopted in conjunction with environmental documentation and other relevant factors.
- b. Implement the residential and non-residential development objectives through the exercise of the City's zoning power and address, at a minimum, the following:
  1. Coordinate Land Use Element Objective A-5 and corresponding implementing actions to maintain fiscally sound land use phasing.
  2. Coordinate the Circulation Element and corresponding implementing actions to maintain adequate circulation capacity and infrastructure.
  3. Ensure that sufficient land is zoned for residential opportunities to achieve the City's quantified



objectives: to realize a diversity of housing types and affordability requirements; to meet the development objectives of the Housing Element; and to be compatible with non-residential objectives.

- c. Ensure that existing Citywide service levels are not compromised over time by quantifying existing levels of service, extending the same levels of service to newly-developed areas, and by requiring planning areas with particular health, safety, and environmental constraints to provide an independent means to mitigate their particular service provision constraints while providing flexibility to foster innovative solutions.<sup>38</sup>
- d. Ensure the availability of adequate public facilities for any new development proposals.<sup>39</sup>

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<sup>38</sup> City of Irvine General Plan Land Use Element Objective A-5, Implementing Action a "Modified"

<sup>39</sup> City of Irvine General Plan Land Use Element Objective A-5, Implementing Action g

## OBJECTIVE O-8 MONITORING

Monitor development and evaluate its status with respect to the General Plan and state, regional, and local cooperative planning efforts.

### Implementing Actions:

- a. Establish a Development Monitoring Program (DMP) in order to annually evaluate compliance with public facility and comprehensive phasing to maintain a balanced land use mix.
  1. Utilize studies/survey data from Objective A-1 and provide an annual monitoring report regarding the attainment of these objectives and criteria.
  2. Through the DMP, follow employment trends within the central/south Orange County area. This program should include close coordination with SCAG, South Coast Air Quality Management District, the County of Orange, neighboring communities and the development community.
  3. Monitor actual development for comparison to General Plan estimates regarding population and employment figures, and revise estimates through General Plan Land Use Element Objective A-1.
  4. Ensure that monitoring includes studies/surveys of Irvine's built environment to validate General Plan estimates. The studies/surveys should quantify actual employment generation rates, land use and demographic characteristics, wage-earners per household, commuting patterns and other factors that influence a balanced land use mix.
- b. Report to the City Council on a regular basis on the status of General Plan objectives, including but not limited to:
  - fiscal ratios
  - balanced land use mix
  - circulation levels of service
  - phasing of land uses
  - phased dedication of open space
  - maintenance of General Plan database

- circulation phasing<sup>40</sup>

- c. Monitor and analyze trends with respect to the General Plan database, and recommend policy adjustments where appropriate.<sup>41</sup>
- d. Monitor development and changes to the City's adopted land use plan, and through the use of a General Plan-based fiscal impact evaluation model, modify development patterns and phasing as necessary to ensure that land use decisions do not conflict with the implementing action identified in the General Plan Land Use Element Objective A-5(a).<sup>42</sup>
- e. Through the Development Monitoring Program, ITAP (or successor), Trip Generation Rates shall be evaluated and monitored. Any change to the Trip Generation Rates shall be analyzed to determine any effects on the Traffic Level of Service Standards of the Circulation Element of the General Plan and intersection capacity standards. This component of the Development Monitoring Program shall be reviewed annually by the Transportation Commission, Planning Commission, and the City Council.<sup>43</sup>

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<sup>40</sup> City of Irvine General Plan Land Use Element objective A-1, Implementing Action a

<sup>41</sup> City of Irvine General Plan Land Use Element Objective A-1, Implementing Action d

<sup>42</sup> City of Irvine General Plan Land Use Element Objective A-5, Implementing Action e

<sup>43</sup> City of Irvine General Plan Circulation Element D-1, Implementing Action i "Modified"

## OBJECTIVE O-9 MANAGEMENT OF FUNDS

Pursue the appropriate expenditure of revenue from state, regional, and local sources to enhance transportation and public facilities and to maintain the City's eligibility for future allocations in order to expedite implementation of projects funded in whole or in part by state, regional, and local sources.

### Implementing Actions:

- a. Expend Revised Traffic Improvement and Growth Management Ordinance (Measure M) revenues in a timely manner (three (3) years).



## POLICIES AND STANDARDS

### Public Facilities Standards:

Public facilities standards for public and private facilities shall be initially developed according to the following General Plan figures:

Figure G-1, Recommended District Center Component and Preliminary Site Size Guidelines

Figure G-2, Comprehensive Facilities Standards pertaining, but not limited, to police, fire, library, parks, and flood control

Figure G-3, Service Population and Site Size Guidelines for Major Public Facilities

### GROWTH MANAGEMENT ELEMENT DEFINITIONS

**Capital Improvement Program (CIP)** - A listing of capital projects needed to meet, maintain, and improve a jurisdiction's adopted Traffic Level of Service and standards. The CIP shall include proposed and approved projects as well as a financial plan for implementation.

**Comprehensive Phasing Program (CPP)** - Ensure through a road and public facilities improvement and financing plan which responds to the level of service requirements that infrastructure such as roadways and other public facilities and services are provided commensurate with demand; and that development is phased in a manner which quantitatively links residential and non-residential development to the adequate provision of roads, transit, and other public facilities and services, such as, but not limited to, libraries, police, fire, parks and flood control. The CPP shall include an Infrastructure Phasing Program and a Development Phasing Program.

**Critical Movement** - The conflicting through or turning movements at an intersection which determine the allocation of green signal time.

**Deficient Intersection Fund** - A trust fund established to implement necessary improvements to existing intersections which do not meet the Traffic Level of Service Standard.

**Deficient Intersection List** - A list of intersections that:  
1) do not meet the Traffic Level of Service Standards for reasons that are beyond control of the City of Irvine (e.g.,

ramp metering effects, traffic generated outside the City of Irvine's jurisdiction) or due to development project approvals (i.e., Concept Plans, Zone Changes, Master Plans, Subdivision Maps, and Conditional Use Permits) prior to the adoption date of this Element and; 2) are not brought into compliance with the Level of Service (LOS) Standard in the most current Seven-Year Capital Improvement Program. Additional intersections may be added by the City of Irvine to the Deficient Intersection List only as a result of conditions which are beyond the control of the City of Irvine.

**Development Phasing Program** - A program which will establish the requirement that building and grading permits shall be approved or issued in a manner that assures implementation of required transportation and public facilities improvements. The DPP shall specify the order of improvements and the phasing of residential and non-residential development based, at a minimum, on mitigation measures adopted in conjunction with environmental documentation and other relevant factors.

**Growth Management Areas (GMAs)** - Subregions of the County of Orange established by the City - County Coordination Committee, The Regional Advisory Planning Council, to promote inter-jurisdictional coordination in addressing infrastructure concerns and in implementing needed improvements.

**Growth Management Element** - The Growth Management Element of the City of Irvine General Plan as required by the Revised Traffic Improvement and Growth Management Ordinance (Measure M).

**Infrastructure Phasing Program (IPP)** - A phasing program which will ensure that infrastructure is added as development proceeds. The IPP shall correlate infrastructure improvements to land use, with specific emphasis on circulation capacity and public facility needs. The IPP shall provide reasonable lead time for the design and construction of specific transportation and other public facilities improvements.

**Local Transportation Authority** - As designated by the Orange County Board of Supervisors, the Orange County Local Transportation Authority.

**Measurable Traffic** - A traffic volume resulting in a 0.01 increase in the sum of the critical movements at an intersection.

**Public Facilities and Services** - For purposes of this Element, public facilities and services are defined as, but not limited to, police, fire, libraries, parks, and flood control.



**Traffic Level of Service Standards** - Consistent with the Circulation Element Policies and Standards, the following Level of Service (LOS) Standards shall be applied to arterials and intersections, as shown in Figure D-5 of the Circulation Element, which are in the City of Irvine or its sphere of influence and which are under the City's jurisdiction.

LOS "E" or better shall be considered acceptable within the Irvine Business Complex (PA 36) and Irvine Center (PA 33).

LOS "D" or better shall be considered acceptable within all other planning areas.

Level of Service Standards for intersections are defined as follows:

Level of Service "A": The volume/capacity ratio ranges from .0 to .60. At this LOS, traffic volumes are low and speed is not restricted by other vehicles. All signal cycles clear with no vehicles waiting through more than one original cycle.

Level of Service "B": The volume/capacity ratio ranges from .61 to .70. At this LOS, traffic volumes begin to be affected by other traffic. Between one and ten percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.

Level of Service "C": The volume/capacity ratio ranges from .71 to .80. At this LOS, operating speeds and maneuverability are closely controlled by other traffic. Between 11 and 30 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.

Level of Service "D": The volume/capacity ratio ranges from .81 to .90. At this LOS, traffic will operate at tolerable operating speeds, although with restricted maneuverability. More than 30 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic hours.

Level of Service "E": The volume/capacity ratio ranges from .91 to 1.0. Traffic will experience restricted speeds, vehicles will frequently have to wait through two or more cycles at signalized intersections, and any additional traffic will result in breakdown of the traffic carrying ability of the system.

Level of Service "F": V/C ratio exceeds 1.00, long queues at traffic, unstable flow, stoppages of long duration with traffic volumes and traffic speed can drop to zero. Traffic volumes will be less than the volume which occurs at Level of Service "E."

Level of Service Standards for roadway links are defined as follows:

Level of Service "A": The volume/capacity ratio ranges from 0.0 to 0.60. This LOS indicates no physical restriction on operating speeds.

Level of Service "B": The volume/capacity ratio ranges from 0.61 to 0.70. This LOS indicates flow with few restrictions on operating speeds.

Level of Service "C": The volume/capacity ratio ranges from 0.71 to 0.80. This LOS indicates stable flow, higher volume, and more restrictions on speed and lane changing.

Level of Service "D": The volume/capacity ratio ranges from 0.81 to 0.90. This LOS indicates tolerable conditions, approaching unstable flow, and little freedom to maneuver.

Level of Service "E": The volume/capacity ratio ranges from .91 to 1.0. This LOS indicates unstable flow, lower operating speeds than LOS D and some momentary stoppages.

Level of Service "F": The volume/capacity ratio exceeds 1.00. This LOS indicates forced flow operation at low speeds where the roadway acts as a storage area and there are many stoppages.



#### RELATED OBJECTIVE NUMBERS

Land Use Element - A-1, A-5, A-9,  
Circulation Element - D-1, D-2, D-3, D-4, D-6, D-7  
Public Facilities Element - G-1, G-2

#### COMPLIANCE STANDARDS AND REFERENCES

City of Irvine Zoning Ordinance

California Environmental Quality Act (CEQA) and Implementing Procedures

City of Irvine Capital Improvement Program

1991 Air Quality Management Plan

Countywide Revised Traffic Improvement and Growth Management Ordinance (Measure M)

Countywide Growth Management Program Implementation Manual

## GLOSSARY

### A

Acoustics - (1) The science of sound, including the generation, transmission, and effects of sound waves, both audible and inaudible. (2) The physical qualities of a room or other enclosure (such as size, shape, amount of noise) that determine the audibility and perception of speech and music.

Active Recreation - Leisure time activities, usually of a more formal nature and performed with others, often requiring equipment and taking place at prescribed places, sites, or fields.

Activity Corridor - The east-west linear corridor, bounded by parkways, with a grouping of public and private facilities connecting Irvine Industrial Complex-East, Irvine Center, Irvine Business Complex with the residential villages of the flatlands.

Adequate Housing - Housing which: (1) is structurally sound, water-tight and weather-tight, with adequate cooking and plumbing facilities, heat, light and ventilation; (2) contains enough rooms to provide reasonable privacy for its occupants; and (3) is within the economic means of the households who occupy it.

Affordability - Refers to the amount paid for shelter; a household is considered to have problems with affordability if they occupy a unit at a cost greater than 30% of gross household income.

Ambient Noise Level - That level that exists at any instant, regardless of source.

Amenity - Any service or facility which extends beyond the definition of adequate housing.

Annexation - The incorporation of a land area into the existing community with a resulting change in the boundaries of the community.

Archaeological Site - Any mound, midden, settlement, burial ground, mine, rock art, or other location containing evidence of human activities which took place prior to 1542 A.D.

Area - As used in the land use element, that tract of contiguous land within one land use category.

At-grade - The crossing of two movement channels of transportation at the same elevation or level.

Average Existing Slope Formula - 
$$S = \frac{100 \times I \times L}{A}$$

S = Average Existing Slope

I = Contour intervals in feet

L = Sum of length of contours in feet excluding drainage courses, rock outcroppings and all permanent open space within the project area.

A = Total square feet in a project area excluding drainage courses rock outcroppings and all permanent open space within the project area.

## B

Barrier - An element which obstructs access. It may serve as a visual and/or functional obstruction.

Berm - An embankment, usually extending in a linear alignment. Berms can function as visual screens, noise attenuators, and water diverters.

Bicycle Trail - A paved pathway designed to be used by bicyclists.

## C

Capital Improvement - A government acquisition of real property, major construction project, or acquisition of long lasting, expensive equipment.

Capital Improvement Program (CIP) - A proposed timetable or schedule of all future capital improvements to be carried out during a specific period and listed in order of priority, together with cost estimates and the anticipated means of financing each project.

Cemetery - Property used for the interring of the dead.

CEQA - California Environmental Quality Act

Channel - A water course with a definite bed and banks which confine and conduct the normal continuous or intermittent flow of water.

Character - An attribute, quality or property of a place, space, or object. The distinguishing character of a place, space, or object.

Circulation - An all-inclusive word which describes movement and paths of movement. It includes: pedestrian, bicycle, automobile, and aircraft movement.

Civic Center - A concentration or an assembly of governmental buildings and other semi-public functions.

Class I Bikeway - A completely separated travel way designed for the exclusive use of bicycles.

Class II Bikeway - A shared travel way with only signing and striping provided.

Community Association - A homeowners association organized to own, maintain, and operate common facilities and to enhance and protect their common interests.

Community Collector - A medium speed highway abutting similar land uses and providing for the collection or distribution of local traffic. The primary function is to collect and distribute trips within a hierarchy of roads and, secondarily, to carry short trips between adjacent neighborhoods. A community collector has emergency parking only and has a significant amount of parallel and perpendicular pedestrian traffic.

Community Facility - A building or structure owned and operated by a governmental agency to provide a governmental service to the public.



Community Noise Equivalent Level (CNEL) - A scale that accounts for A-weighted acoustic energy received at a point over a 24-hour period. To reflect the increased annoyance caused by noise events during the evening and nighttime, weighting factors of 5 dBA and 10 dBA are added to the sound levels between 7-10 p.m. and 10-7 a.m., respectively.

Community Parks - Community parks serve more than one village. They vary in size, but are generally 20 acres and should meet the need of all age groups by providing a wide variety of land use.

Commuter Highway - An arterial highway of two through lanes and a divided or undivided median. Commuters provide for: 1) the movement of inter-village traffic, or 2) the movement of traffic to and from activity centers within villages.

Concept Plan - A planning tool used to resolve issues for an entire village. The concept plan represents a composite of general plan information to serve as a guide on future zoning request. Includes such issues as land uses, phasing, public facilities, park, grading, and drainage.

Conditional Use - A use permitted in a particular zoning district only upon showing that such use in a specified location will comply with all the conditions and standards for the location or operation of such use as specified in a zoning ordinance.

Condominium - A building, or a group of buildings, in which units are owned individually, and the structure, common areas, and facilities are owned by all the owners on a proportional, undivided basis.

Conveyance Area - Preservation areas that are to be conveyed to the City as part of the Phased Dedication and Compensating Development Program (see Two Part Conveyance).

County Median Income - The Orange County median income figure is published by the U.S. Department of Housing and Urban Development (HUD) on an annual basis. For the current County of Orange median income figure, you may contact HUD at 1-800-245-2691 or write, HUD Los Angeles Office, Region IX, 1615 West Olympic Boulevard, Los Angeles, CA 90015-3801.

Cultural Facilities - Establishments such as museums, art galleries, botanical, or zoological gardens of an historic, educational, or cultural interest, which are not operated commercially.

## D

dBA - A quantity in decibels read from a sound level meter that is switched to the weighting network labeled "A." The A-weighting network discriminates against the lower frequencies according to a relationship approximating the sensitivity of the human hearing mechanism.

Decibel - (Abbreviated "dB") A unit of noise measurement indicating the loudness of sound. It is based on logarithmic scale, of the magnitude of a particular quantity (such as sound pressure, sound power, intensity) with respect to a standard reference value (0.0002 microbars for sound pressure and 10-12 watt for sound power).



Department of Housing and Community Development (HCD) - The department of the California State Government which has responsibility for housing policy and programs. HCD establishes the guidelines for preparation of local housing elements, prepares the statewide housing element, and offers technical assistance to local jurisdictions.

Department of Housing and Urban Development (HUD) - The department of the federal government which administers a variety of housing programs. These include Section 8, Section 202, and the Community Development Block Grant.

Development Agreement - Any city, county, or city and county may enter into a development agreement with any person having a legal or equitable interest in real property for the development of property as provided in Government Code Section 65865. A development agreement specifies the duration of the agreement, the permitted uses of the property, the density or intensity of use, maximum height and size of proposed buildings, and provisions for reservation or dedication of land for public purposes. Also, a development agreement may include conditions, terms, restrictions, and requirements for subsequent discretionary actions, provided that such conditions, terms, and requirements for subsequent discretionary actions will not prevent development of the land for the uses and to the density or intensity of development set forth in the agreement.

Development Area - The total of all project areas within a given planning area excluding Preservation and Open Space Areas.

Development Monitoring Program - Refers to a program identified in the General Plan that in part, monitors fiscal ratios, job-to-housing balance, circulations levels of service, phasing of land uses, phased dedication of open space, maintenance of the general plan database, circulation phasing and evaluates the status of the General Plan.

Dwelling Unit - One or more room and a single kitchen, designed for occupancy by one family for living and sleeping purposes.

## E

EIR - Environmental Impact Report.

Expressway - A divided high-flow arterial highway with three or more lanes in each direction and grade-separated intersections and/or access ramps (Jamboree Road).

## F

Fault - A fracture in the earth's crust forming a boundary between rock masses that have shifted. An active fault is a fault that has moved recently and which is likely to move again. An inactive fault is a fault which shows no evidence of movement in recent geologic time and no potential for movement in the relatively near future.

Freeway - A divided state highway with access restricted to grade-separated interchanges. Freeways provide for movement of high volumes of inter-city traffic.

Frequency - The frequency of a sound wave, expressed in cycles per second, or hertz, determines the "pitch" of the sound. High frequencies produce high-pitched sounds, and low frequencies produce low-pitched sounds.

## G

Gateway - At the urban scale, gateways are referred to as the major entrances to the City.

Goal - A general, overall, and ultimate purpose, aim, or end toward which the City will direct effort.

Grading - Any stripping, cutting, filling, stock piling of earth or land, including the land in its cut or filled condition.

Greenbelt - An open area which may be cultivated or maintained in a natural state surrounding development or used as a buffer between land uses or to mark the edge of an urban or developed area.

Ground failure - Mudslide, landslide, liquefaction, or the seismic compaction of soils.

Groundwater - The supply of freshwater under the surface in an aquifer or soil that forms the natural reservoir for potable water.

## H

Handicapped - Persons determined to have a physical impairment or mental disorder which is expected to be of long-continued or indefinite duration and is of such a nature that the person's ability to live independently could be improved by more suitable housing conditions.

Hertz - Unit of measurement of frequency, numerically equal to cycles per second.

Hierarchy - Any system of interrelated persons or things, ranked one above another in descending order of importance or size.

Historical Site - Any structure, place, or feature which is or may be significant to the post 1542 A.D. history, architecture, or culture of the nation, state, region, or community.

Household - All persons occupying a single dwelling unit.

Housing Unit - The place of permanent or customary and usual abode of a person, including a single-family dwelling, a single unit in a two-family dwelling, multi-family or multi-purpose dwelling, a unit of a condominium or cooperative housing project, a non-housekeeping unit, a mobile-home, or any other residential unit which either is considered to be real property under State law or cannot be moved without substantial damage or unreasonable cost.

## I

IBC - Irvine Business Complex.

Identity - Unity and persistence of personality; clarity of organization within a broad group of dissimilar objects. Synonymous with comprehensibility.

IIC-E - Irvine Industrial Complex-East.

Image - A mental representation, a conception or idea. Imageable urban form would be where the differentiated parts of the City would be integrated into a visual whole that is coherent, meaningful, memorable, and highly pleasurable.

Impact - A word used to express the extent or severity of an environmental problem, e.g., the number of persons exposed to a given noise environment.

Implementation Actions Program - (See Phased Dedication and Compensating Development Program).

Implementation Districts - Portions of the City directly involved in the Phased Dedication and Compensating Development Program. The portions have been divided into separately lettered "Implementation Districts" containing both open space lands for ultimate conveyance to the City and corresponding development areas.

Income - Salary and/or wages, interest from assets, tips, pensions, assistance grants. If assets exceed \$5,000, income shall also include actual income from assets or 10% of their value, whichever is greater. Net assets include equity in real property, savings, stocks, bonds, and other forms of capital investment.

Income Level(s) - Four levels are included relating to the Orange County HUD median income:

Income I is defined as households earning 0-30% of the HUD county median income.

Income II is defined as households earning 30-50% of the HUD county median income.

Income III is defined as households earning 50-80% of the HUD county median income.

Income IV is defined as households earning 80-120% of the HUD county median income.

Infrastructure - Facilities and services needed to sustain industry, residential, and commercial activities. Infrastructure includes water and sewer lines, streets and roads, communications, and public facilities such as fire houses, parks, etc.

Institutional Use - A non-profit or quasi-public use or institution such as a church, library, public or private school, hospital, or municipally owned or operated building, structure or land used for public purpose or not-for-profit housing.

Interfaith Centers - Religious facilities for worship, education, and fellowship activities which are shared by two or more denominations.

ITAP - Irvine Traffic Analysis Program.

IUSD - Irvine Unified School District.

## L

Land Use - Putting land, water and air space to a specific use - a description of how land is occupied or utilized.

Large Family - A family of 5 or more persons.



Ldn - The day/night average level established by the U.S. Environmental Protection Agency. It is similar to the CNEL descriptor; however, there is no evening weighting, only a 10 dBA weighting for the nighttime hours.

Leq - The equivalent steady-state that, in a stated period of time, would contain the same acoustic energy as the time-varying level.

Level of Service (LOS) - A scale that measures the amount of traffic a roadway may be capable of handling on a roadway or at the intersection of roadways.

Level of Service "A" - The volume/capacity ratio ranges from .0 to .60. At this LOS, traffic volumes are low and speed is not restricted by other vehicles. All signal cycles clear with no vehicle waiting through more than one original cycle.

Level of Service "B" - The volume/capacity ratio ranges from .61 to .70. At this LOS, traffic volumes begin to be affected by other traffic. Between one and ten percent of the signal cycles have one or more vehicles which wait through more than one signal/cycle during peak traffic periods.

Level of Service "C" - The volume/capacity ratio ranges from .71 to .80. At this LOS, operating speeds and maneuverability are closely controlled by other traffic. Between 11 and 30 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.

Level of Service "D" - The volume/capacity ratio ranges from .81 to .90. At this LOS, traffic will operate at tolerable operating speeds, although with restricted maneuverability.

Level of Service "E" - The volume/capacity ratio ranges from .91 to 1.0. Traffic will experience restricted speeds, vehicles will frequently have to wait through two or more cycles at signalized intersections, and any additional traffic will result in breakdown of the traffic carrying ability of the system.

Level of Service "F" - Long queues at traffic, unstable flow, stoppages of long duration with traffic volumes and traffic speed dropping to zero. Traffic volumes will be less than the volume which occurs at Level of Service "E."

Liquefaction - A process by which water-saturated granular soils transform from a solid to a liquid state because of a sudden shock or strain.

Local Street - A low speed, low volume highway primarily for access to residential, business, and other abutting property. A local street may have parking and a significant amount of parallel and perpendicular pedestrian traffic.

Loudness - The judgement of intensity of a sound by a human being. Loudness depends primarily upon the sound pressure of the stimulus. Over much of the loudness range it takes about a threefold increase in sound pressure (approximately 10 dB) to produce a doubling of loudness.



## M

Major Highway - A divided arterial highway of six to eight through lanes. Majors provide for: 1) the movement of inter-village through traffic, and/or 2) the distribution of traffic to and from Freeways or Transportation Corridors.

Major Ridgelines - Those ridgelines which are illustrated on General Land Use Element Figure A-23.

Market-Rate Households - Households who, as determined by the City, have the financial capability to meet their housing needs without sacrificing other essential needs.

Mass Grading - The movement for redistribution of large quantities of earth over large areas. Distribution of the majority of the on-site surface terrain is common. Modifications or elimination of minor natural landforms may result.

Mass Transit - A public common carrier transportation system having established routes and schedules.

MCAS - Marine Corps Air Station.

Mitigation Measures - Means by which an adverse impact may be lessened or minimized.

## N

Natural Slope - The physical characteristic of a given area of undisturbed land which is determined by the Average Existing Slope Formula.

Needing Rehabilitation - Refers to a housing unit which, in its present state, materially endangers the health, safety, or well-being of its occupants in one or more respects, and which is economically feasible to repair.

Needing Replacement - Refers to a housing unit which, in its present state, materially endangers the health, safety, or well-being of its occupants in one or more respects, and which is not economically feasible to repair.

Neighborhood - A neighborhood is the smallest settlement unit. In Irvine the term is generally used synonymously with tract increment within Planning Areas.

Neighborhood Park - A neighborhood park is intended to serve local residents and should be within walking distance of the household it serves. Public neighborhood parks range in size from 3 to 12 acres and serve a minimum of 2,500 people each. Primary uses include passive open space, active play areas for children. Private neighborhood parks, are placed in the interior of residential developments or condominium complexes, and exclusively serve association members. They are more intensely developed and adult oriented.

Noise - Any sound that is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying.

Noise Sensitive Land Uses - As identified in the City's Noise Element (page F-3), noise sensitive land uses include residential, convalescent and rest homes, hospitals, libraries, churches, and schools.

Non-Market-Rate Households - Households who, as determined by the City, do not have the financial capability to meet their housing needs without sacrificing other essential needs.

## O

OCTD - Orange County Transit District.

Open Space - Any parcel or area of land or water essentially unimproved and set aside, dedicated, designated, or reserved for public or private use or enjoyment, or for the use and enjoyment of owners and occupants of land adjoining or neighboring such open space.

Open Space Spine - An open space corridor that provides a variety of recreational opportunities, and which link and integrate other conservation and open space areas into the land use system of the City.

Ordinance - A municipally adopted law or regulation.

OSPTC - Open Space, Parks, and Trails Committee.

Overcrowding - Households which have 1.01 or more persons per room are considered to have needs with respect to overcrowding.

## P

Paleontological Site - Any area or location containing a trace or impression, or the remains, of plants or animals from past ages.

Park - Any public or private land set aside for aesthetic, educational, recreational, or cultural use.

Parkway - A moderate speed arterial highway abutting and distributing trips to a variety of land uses. This facility primarily serves short-range trips and is a significant environmental element as it borders the activity corridor. A parkway has emergency parking only and will have considerable parallel and perpendicular pedestrian movement.

Phased Dedication and Compensating Development Program - A program that links the dedication of conservation and open space areas (Implementation Districts) to the development entitlement process. The purpose of the Program is to provide permanent protection of open space by means of public ownership.

Pitch - A listener's perception of the frequency of a pure tone; the higher the frequency, the higher the pitch.

Planning Area - A designation used in the City of Irvine General Plan and Zoning Ordinance for land areas for planning and statistical purposes. Each planning area is distinct from each other as exhibited through development intensity, land uses, open space or natural features, landscaping or architectural styles. (Previously referred to as Village.)

Policy - A collective term describing those parts of a general plan that guide action, including goals, objectives, implementing actions, and standards in both the text and diagrams.

Primary Highway - A divided arterial highway of four through lanes. Primaries provide for: 1) the movement of inter-village traffic; 2) the movement of traffic to and from activity centers within villages; and/or 3) the distribution of traffic to and from Freeways or Transportation Corridors.

Prime Agricultural Land - Land which qualifies for rating as Class I or Class II in the Soil Conservation Service land use capability (based on soil characteristics and climatic conditions).

Project Area - A geographic area to be defined in a concept plan or master tentative map with boundaries generally related to existing landforms, such as plateaus, bowls, draws and within one general plan land use category.

Public Facilities - Institutional response to basic human needs, such as health, education, safety, recreation, and inspiration.

## Q

Quasi-public - A use owned or operated by a non-profit, religious or eleemosynary institution and providing educational, cultural, recreational, religious, or similar types of public programs.

## R

Recreation and Activity Centers - Public, private, or quasi-public structured or unstructured open space, such as community, and regional parks, golf courses, and cemeteries.

Recreation Facility - A place designed and equipped for the conduct of sports, leisure time activities and other customary and usual recreational activities.

Regional Parks - Regional parks are large open spaces and recreational facilities provided either partially or wholly by the County of Orange. They serve the needs of persons throughout Orange County.

Residential Density - The number of dwelling units per gross acre.

Resource Survey - An on-foot reconnaissance of an area conducted for the purpose of determining the presence or absence of historical, archaeological, or paleontological resources.

Right-of-way - A strip of land acquired by reservation, dedication, forced dedication, prescription, or condemnation and intended to be occupied or occupied by a road, crosswalk, railroad, electric transmission lines, oil or gas pipeline, waterline, sanitary storm sewer, and other similar uses.

Riparian - Of, adjacent to, or living on, the bank of a river or, sometimes, of a lake, pond or waterway.



## S

SB - Senate Bill.

Senior Citizens - Persons age 62 or over.

Scenic Corridor - The scenic corridor is the visible area outside the highway's right-of-way, generally described as "the view from the road."

Scenic Highway - A scenic highway is composed of the road and its right-of-way, and the scenic corridor. Rural scenic highways are routes which traverse corridor where natural scenic resources and aesthetic values may be found, such as agricultural or natural areas. Urban scenic highways are routes that traverse an urban area, with the scenic corridor offering a view of attractive and exciting urban scenes.

Secondary Highway - An undivided arterial highway of four through lanes. Secondaries provide for: 1) the movement of inter-village traffic, and/or 2) the movement of traffic to and from activity centers within Planning Areas.

Shall - That which is obligatory or necessary.

Significant Site - A site which, regardless of size, in the opinion of an historian, archaeologist, or paleontologist and the City, could yield new information or important verification of a previous finding, or be of significant scientific, cultural, educational, or recreational value, either now or in the future.

Sphere-of-influence - Unincorporated territory to be ultimately annexed and served by the City; land use is controlled by the County.

Streetscapes - Landscaped areas adjacent to public or private streets to buffer adjacent developments which may serve as a means for reducing noise impact.

Statistical Area - A planning unit that contains primarily industrial commercial or agricultural land uses, it is defined by either open space elements or arterial streetscapes.

Subdivision - The division of a lot, tract, or parcel of land into two or more lots, tracts, parcels or other division of land for sale, development, or lease in accordance with the Subdivision Map Act.

Suitability/Habitability - Refers to the condition of a housing unit; households living in units requiring rehabilitation or replacement are considered to have needs with respect to suitability and/or habitability.

Swale - A hollow depression or low area of land; specifically a stretch of land in a wet, marshy area.

## T

Temporary Bikeway - A Class I or Class II bikeway which will be removed or relocated at some future time.

Theme - The pervasive character of an area, development, or special place.



7Thruway - A relatively high speed arterial highway with restricted access supplementing the Freeway System and carrying intermediate range trips to or between major nonresidential land uses. A thruway has emergency parking only, and minimal pedestrian interference with traffic.

Transition Areas - Buffer areas separating preservation areas and areas of development.

Transportation Corridor - A multi-modal facility with restricted access having a median of sufficient width to be utilized for fixed rail or high occupancy vehicle lanes, in addition to general purpose lanes. Transportation Corridors provide for movement of inter-city traffic.

Two Part Conveyance - Offers of open space conveyance as identified in the Land Use Element and Conservation and Open Space Element of the General Plan may be made in two parts. The first part contains to the greatest extent possible substantially all the Preservation Area and is offered for conveyance no sooner than ninety days following issuance of building permits for 75% of the development in the district, whichever first occurs (see Land Use Figure A-20). However, Preservation Area lands abutting potential development areas may be excluded from the first part. The boundaries of the second part are defined and offered for conveyance upon the recordation of final maps for development abutting the area to be dedicated. Where appropriate, the transition zone may be offered for conveyance as open space easements.

## U

Urban Design Structure - Framework which guides the development of the planning area, is comprised of the open space system, the circulation, network, and the village and district structure.

Use - Purpose for which land or a building is occupied, arranged, designed, or intended, or for which either land or building is or may be occupied or maintained.

## V

Vesting Map - A map which meets the requirements of subdivision (a) and Section 66452 of the California Government Code.

View - That which is seen; a prospect. Something to be looked at with attention.

Village - See "Planning Area."

## W

Waste Management - An efficient system for the collection and disposal of waste products generated by households, industry, and commercial enterprises.

Windrow - A plantation of trees or a structure to reduce the force of a prevailing wind.

## Z

Zone - A specifically delineated area or district in a municipality within which regulations and requirements uniformly govern the use, placement, spacing and size of land and buildings.

Zoning - The dividing of a municipality into districts and the establishment of regulations governing the use, placement, spacing, and size of land and buildings.

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